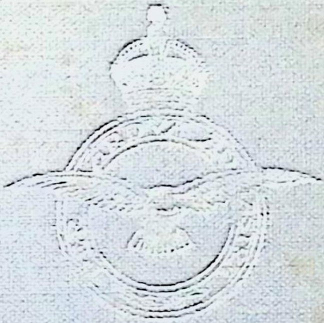

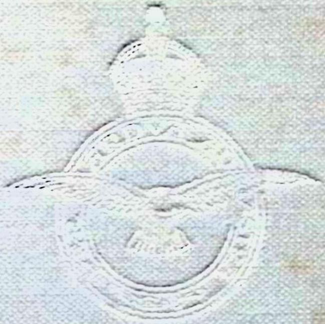

# WINGED WORDS

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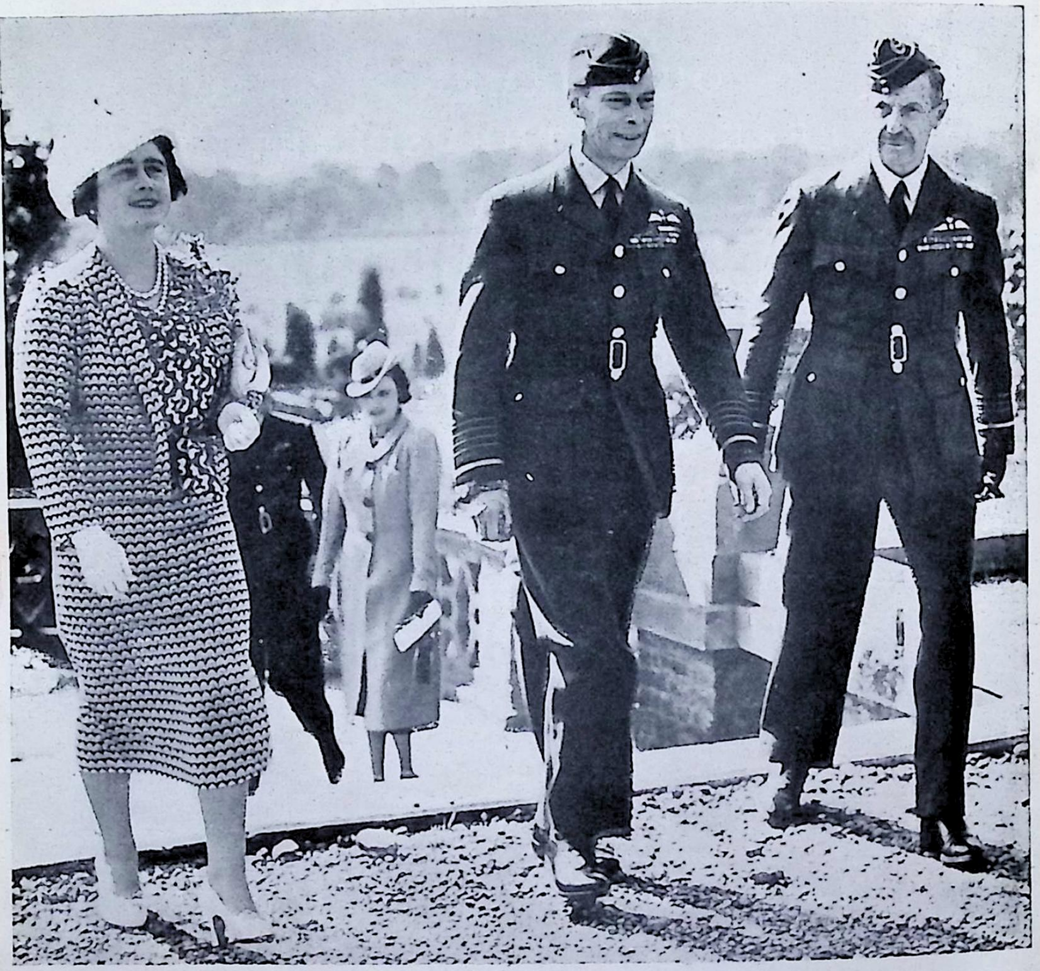

Their Majesties the King and Queen accompanied by Air Chief Marshal Sir Hugh Dowding, until November, 1940, Air Officer Commanding-in-Chief, Fighter Command

# WINGED WORDS

## OUR AIRMEN
## SPEAK FOR THEMSELVES

WILLIAM HEINEMANN LTD
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# COMPILER'S NOTE

THE stories which appear in this book have been selected from among some 150 broadcast talks given at the B.B.C. and transmitted to many parts of the world between December, 1939 and February, 1941. They were broadcasts by R.A.F. officers and airmen and the W.A.A.F.

In their choice no attempt has been made to consider literary merit, but rather to give as comprehensive a picture as possible of the wide and varied activities during that period of the Home Commands of the R.A.F.—both in the air and on the ground.

The talks have been arranged in chronological order and so depict to some extent the constantly changing phases of the war.

I should add that the scripts have not been altered and are now published in the form in which they were originally broadcast.

E. B. B.

# ILLUSTRATIONS

Their Majesties the King and Queen accompanied by Air Chief Marshal Sir Hugh Dowding *frontispiece*

*The following illustrations are to be found at the end of the book.*

Air Chief Marshal Sir Charles F. A. Portal, K.C.B., C.B.F., D.S.O.
An aircraft of Coastal Command over Kristiansand
The *Altmark* in Jossing Fiord, Norway
Hurricanes above the clouds
A flight of Spitfires on patrol
A Dornier "Flying Pencil" diving to destruction
A Sunderland flying boat sights the sinking *Kensington Court*
Channel Convoy
A parachute descent
A Sunderland flying boat
Adrift in a rubber dinghy
Blenheims on patrol
"Return at Dawn," by Charles Cundall
A Czech pilot officer lectures to his countrymen
Pilots studying the day's operations
"Air Battle," by Norman Wilkinson
"Raid on Sylt," by Norman Wilkinson
A Blenheim Aircraft of Bomber Command
Pupils training on North American Harvard planes
"Flight Lieutenant R. A. B. Learoyd, V.C.," by Eric Kennington
"Sergeant J. Hannah, V.C.," by Eric Kennington
Flight-Lieutenant J. B. Nicolson, V.C.
Corporal J. D. M. Pearson, W.A.A.F., E.G.M., by Dame Laura Knight
Balloon Barrage
Fabric workers repairing damaged barrage balloons

# PREFACE

## By MARSHAL OF THE ROYAL AIR FORCE THE VISCOUNT TRENCHARD

G.C.B., G.C.V.O., D.S.O., D.C.L., LL.D.

During the past year I expect that many of you, wherever you may have been—in your homes, in shelters, or at lonely listening posts—will have been cheered and inspired by hearing on the radio some of the broadcast stories of the R.A.F. which appear in this book.

It is, of course, a new idea for the Services to speak of their doings in public, but fortunately the identities of the speakers are hidden by the cloak of anonymity. All the same, I believe that these men would have done anything to have avoided the ordeal of facing the microphone if there had not gone with it a visit to London.

I think that the stories, which follow, speak for themselves; they describe not only exciting combats between fighters by day and by night, long bombing raids in the dark over Germany and Italy, arduous reconnaissances over the North Sea, but also other important and interesting points of Service life, such as training, maintenance and intelligence. The book includes, too, accounts of exploits of Dominion, American and Allied officers and men.

To one who has been so closely associated with the R.A.F. since its very earliest days, this book gives particular pleasure, for it shows in a striking manner that the fine traditions of the pioneers in the R.F.C. and R.N.A.S. are being more than worthily upheld by the R.A.F. of the present day.

Trenchard

Marshal of the Royal Air Force.

*December*, 1939

# CHRISTMAS DAY IN COASTAL COMMAND

### BY A SQUADRON LEADER, R.A.F.V.R.

As you can imagine, the Royal Air Force in Great Britain has had to be on its toes over Christmas. This has been particularly true of the crews of Coastal Command aircraft.

Co-operating with the Royal Navy, they are responsible for the safety of shipping on the seas of Western Europe. For them, there could be no holiday . . . Enemy submarines for ever on the prowl . . . the possibility of German warships breaking out from their bases . . . watch to be kept on the great convoys of merchant vessels on their way to Britain . . . the traffic lanes to be searched for mines.

Since the war began, the aircraft of the Coastal Command have flown fully four million miles, on watch and guard over the North Sea and the Atlantic. In other words, in four months, the crews of this Command have covered a distance equal to more than 165 journeys round the Equator.

A substantial part of this immense air mileage has been contributed by the Royal Air Force flying boats, many of which are flying boats of the type used on the Empire routes for the carriage of passengers and mails.

In outward appearance these Royal Air Force and Empire flying boats are identical. But the interior furnishings are very different. In one, as you know, there are armchair seats, tasteful dining-rooms, and comfortable sleeping quarters. But the inside of an R.A.F. flying boat is an arsenal, with batteries of guns on both decks and a ton of bombs slung from a kind of overhead railway on the roof, ready to be run out for easy dropping from the wings.

I spent Christmas Day in one of these flying boats on an anti-submarine and convoy protection patrol of upwards of 1,500 miles over the Atlantic. The crews of the aircraft were aboard, as usual, before dawn, and took off in the darkness so that advantage might be taken of every minute of daylight at sea.

Before we boarded the flying boat, pilots and navigators received their instructions for their Christmas Day's work in a small hut which is the Operations Room of the Squadron. Orders were read to them in front of a big map of the Atlantic seaboard on which seven white graveyard crosses are pinned. Each cross marks the spot where a German submarine has been destroyed by a flying boat of this single squadron.

Just before we left to embark, an orderly from the wireless station brought in a sheaf of messages. They were Christmas greetings from the pilots, crews and passengers on Empire flying boats which are still maintaining, just as in peacetime, their twice weekly, two-way services between Britain and Australia, Central Africa, and South Africa. These messages of goodwill to the Royal Air Force flying boats had been sent from their sister flying boats while they were in the air over the Dutch East Indies, Singapore, Malay, Thailand, Burma, India, the Sudan, Egypt, Kenya and Uganda.

Reading them in that tiny hut on the English shore of the Atlantic on Christmas morning, one could not help feeling some pride in the fact that the British Empire's Command of its civil flying routes is still completely unchallenged.

There was another Christmas Day message. It came from the Australian crews of flying boats now working with the Royal Air Force from a station further north on the west coast of Britain.

By dawn, which came in saffron splendour, we were having breakfast nearly 200 miles at sea. A FULL breakfast—grapefruit, bacon, sausages, eggs, coffee and toast, served piping hot from the galley next door. The cook reported to the young captain of the flying boat, a youth of twenty-two, that he wasn't satisfied with the behaviour of the ice-box in the galley. Why he should be worrying about an ice-box 2,000 feet over the Atlantic on a freezing Christmas morning, neither the pilot nor I could understand.

Back in the control cabin which, like the gun turrets, was decorated with holly and mistletoe, we saw the answer to

Germany's propaganda claim that the Nazi sea and air fleets are blockading Britain.

In the first flush of day, scores of heavy-laden merchant ships from Australia, New Zealand, Africa and South America were riding the seas triumphantly to Britain. Every mile or two for the rest of the day we came on more ships going on their business, unaccompanied and unafraid.

But our special job for Christmas Day was to find and protect a convoy which had been assembled at a rendezvous from all parts of the world and which an escort of French warships was bringing along. We knew that the convoy was about twenty hours late, and that it had gone far off the course set for it because of bad weather and threatened submarine attack.

We could only guess the course it was taking. The ships themselves couldn't help us to locate them. They had, of course, to keep wireless silence so that their position might not be betrayed to lurking U-boats.

Our flying boat combed the sea for 550 miles. Then we found the convoy. Rather, it nearly found us! Cloud had become so dense and low that often we could see only the nose of the flying boat and the wing-tip floats. I heard the pilot beside me whistle sharply. "Blimey!" he said as he lifted the boat suddenly from the height of sixty feet at which we had been flying. In the nick of time he had avoided the masthead of a ship which had appeared beneath the wing. As he climbed to starboard, we saw another mast . . . then another . . . then mast after mast. His anxious look gave way to a happy smile. He took his hand from the joy-stick and cocked his thumb. He was over the lost convoy.

Through the thick mist we could see the columns of ships flashing Christmas greetings to us with their lamps.

The bank of low cloud which blanketed the sea was now more than 200 miles square. We flew through it for a couple of hours and then located the British destroyers which were waiting to take over from the French warships. By lamp signals we gave them the position and course of the convoy.

Our Christmas Day job was now half done.

We had to fly back to the convoy, and for the remaining five hours of daylight, sweep the sea ahead of it for enemy submarines.

As quickly as it had fallen, the thick belt of mist vanished. Wintry sunshine filtered into the flying boat as the crew sat down, two at a time, to a quick Christmas dinner of soup, goose and plum-pudding. Until dusk we cruised for 500 miles in the path which the convoy would take to England. There were no submarines about. At least, if there were, they kept their heads down for fear of our bombs. And a U-boat submerged at sea is as useless as it would be in its base in Germany. Part of the job of the Coastal Command of the Royal Air Force is to destroy them or, failing that, to keep them submerged.

Twice the look-out men on our flying boat gave the "action" call to bring the crew to submarine stations. They did so by pressing a button which caused an electric hooter to scream "DAH-DE-DIH-DI-DOH" throughout the boat. Both times a sea marker was thrown overboard by the lookout men, and the pilot made the flying boat stand on its wing-tip so that the sea was like a wall in front of us, with the horizon over our heads. The pilot's fingers caressed the bomb switches. But no bombs fell. As he swept round the column of smoke rising from the sea-markers, he decided that the ripples of water among the "white-horses" which the look-out men had seen were not the footprints of a submarine periscope, but only the foam on the trail of drifting wreckage.

We had left the English coast in the morning black-out against air raids. Twelve hours later we came back to it—again in complete darkness, just in time for a second, and more leisurely, Christmas dinner.

To-day, Boxing day, the flying boat is out again over the Atlantic, guarding the great convoy of merchant ships on another day's safe march to England. Its crew and the crews of the other flying boats of the Squadron have asked me to offer you their good wishes.

*January*, 1940

# A TALK BY THE SQUADRON COMMANDER OF A BOMBER SQUADRON

Aircraft of my Squadron, with others, have been chosen to take part in raids on Brunsbüttel, on Heligoland and on Wilhelmshaven since the war began.

We are always in a state of readiness, but big shows such as they were, entail very careful planning and preparation. It is essential that everybody knows exactly what his job is. Each man must play his part to the best of his skill and ability. That is his duty to the other members of his crew and to the formation as a whole. We pride ourselves that we have got a fine team spirit among our bomber crews in the Royal Air Force—and it's the team spirit that counts on these occasions.

Well, first of all for the preparation. When the order for a raid comes through—and I have usually found that to be at a time when nearly everyone is in bed—Headquarters give us a zero hour, by which time everything has to be on the top line, and we stand by ready to take off.

My Flight Commanders decide with me who is going. The plan of operation is fixed in all our minds.

Such details as the route to the target, and the way we are coming back, the type of flying formation, the order of attack, methods of defence—all those things are settled. We have planned between us, for every contingency we can foresee. Deputy leaders for each section of the formation have been appointed in case we have trouble of any kind.

We're up some hours before dawn, and have a hurried breakfast before going across to the hangars. I'm afraid I cannot appreciate bacon and eggs at that time of the day.

The armament people have been hard at work during the night. They've got the job of bombing up the planes and loading up with ammunition.

Final instructions have to be issued to all crews and there are the usual last-minute jobs to be done. There seem to be a hundred and one things to check up on. It's really a bit of a relief when, finally, one gets in the air and settled down on the course.

Everyone will be busy to start with. The air gunners checking and testing their guns, the navigator setting out his maps on the chart table, and the wireless operator listening for any messages that may be passed to us. Once we are in the air, he does not transmit for fear of disclosing our position.

As for the Captain, he's got plenty to do. We know it'll be a couple of hours or so before we're in sight of the German coast. But you can well imagine that everyone sits up and takes notice as we get nearer. All aircraft close up tighter in case of attack.

Sixty miles out from the German coast, we get the warning from my rear gunner: "Fighter on the port beam." There's another one to starboard, too, both of them a couple of miles away and flying roughly at the same height and speed as we are. One realises that they're signalling our altitude and speed to the enemy guns.

We can now see the line of the coast thirty or forty miles ahead—only a few minutes' flying. We get through with very little fighter opposition, but then as we get closer to the target, we come under heavy anti-aircraft fire.

The stuff bursts all round. One's surprised to find, the first time, how detached one is about it. Even to the point of being critical of the gunnery.

The formation opens out and we do a bit of dodging—"Evasive action," they call it in the official reports.

Now we have spotted our target—very small, too, at the height we're flying—and we're making straight for it. The signal for attack is given and the bomb doors are opened.

The navigator has now become the bomb aimer. He passes correction of course to the pilot, making allowances on his bomb-sight for our height and speed and also for the wind.

When his sights are on the target—which, at the speed we are travelling may be a mile or two ahead of us—he moves over a lever to release his bombs.

The other aircraft bomb in sequence and in a predetermined order. We've then completed the task we were sent out to do. Now we've got to get back. Bomb doors are closed and throttles opened. The aircraft close up from their open bombing formation to meet the fighters we can see above waiting for us.

As soon as we're out of range of the A.A. guns the fun begins. If there's any sun, the fighters will almost certainly have manœuvred to a position where they can make their first attacks with the sun behind them. It's an old dodge, but always a good one.

On one raid the squadron was in, there must have been about fifty German fighters. They were buzzing about like flies above us. In that particular scrap they made between sixty and seventy separate attacks.

These attacks developed in quick succession from both sides and from astern. Bright flashes went streaking past the wings. These are tracer bullets. Rather an attractive sight, I suppose, if they weren't quite so unfriendly.

This is the test for our own air gunners. Keen as mustard, these fellows, and it's a comforting thought to the other members of the crew to know that they have such good men behind the guns.

On this particular show, despite the fact that we were outnumbered by more than two to one, we more than held our own. The fight lasted over half an hour, with about two enemy attacks a minute.

It's good to know that all the time the fight's going on, the fighters are being drawn farther and farther away from their own bases, and must therefore soon turn back, while every minute brings our formation nearer home.

Gradually the intensity of the attack dies away. When you no longer hear the sound of your own guns, you know it's all over. This is confirmed when one of the chaps in my plane says: "Well, that's that, sir. Let's go."

It's a natural reaction, I suppose, that everybody should become more than usually friendly and attentive now that the tension is relaxed. Soon the rations—a hot drink and some chocolate—are passed round.

So much has happened in so short a time that it's only when the formation has settled down on a course for home that one has time to think it all over. One starts checking up on crew casualties and damage to aircraft. We jot down notes of the more important points of the raid and the scrap, which will be of assistance in making out the report when we get back.

We fly on steadily and the English coast is a very friendly sight when, at last, it appears ahead. Before long we are circling the aerodrome to land.

It is good to be safely home again.

*April*, 1940

# RAIDS ON NORWAY

### BY A BOMBER WING COMMANDER AND SQUADRON LEADER

THIS was a special job of work which we'd had allotted to us, and we shared the task with other squadrons.

We ourselves made four raids in six days. The first was a raid over Bergen. We had had a report that there were two German cruisers in the fjord. We found one cruiser alongside the shore, but didn't attack her for fear of injuring Norwegians. The other ship seemed to be making towards the shore about as quickly as it could, probably guessing that we would not attack it there—but it did not get there in time.

The aircraft, flying low for greater precision in bombing, got a very hot reception from anti-aircraft guns of the ship and on the shore, but they pressed home the attack. It was the leader of the formation who got in a direct hit on the stern of the cruiser. Other bombs fell very close. Another bomber squadron, we believed, scored a hit on the same ship that evening, and, as announced by Mr. Churchill, the cruiser has not been heard of since.

We didn't get away unscathed. One aircraft was hit by pom-poms and a shell took a nasty chunk out of its starboard wing. The pilot was afraid that one of the tyres had been punctured as well and was trying to hurry home so as to make a landing before dark, while all the time the section leader—seeing this big hole in the wing—was aiming at preventing him going too fast because he was afraid that flying at any sort of high speed would increase the damage. Still, he got down without mishap in the end.

Back at the base we had been making all sorts of emergency arrangements in case there were any casualties, but, fortunately, they proved unnecessary. Naturally we were eager to know all about what had happened, but most of the fellows seemed to have been so impressed by the beauty of the Norwegian scenery that at first it was difficult to get them to talk about anything else.

The following evening we called in on Stavanger aerodrome. As we knew there were fighters there, we planned to arrive in the failing light to make it more difficult for them to intercept us. We were also relying on the clouds to cover our approach, but it rather let us down, so we descended to water level. We thought that there we should be less likely to be seen. That attack really was a magnificent sight. The sort of thing that will always remain in one's memory. We had split up into sections of three. Each section seemed to be trying to race the other to the target. We were simply streaking across the water. The other section—not the one I was in—got there first.

The Germans put up a terrific barrage over the target before we got there, but our chaps simply went straight in. We flew across that aerodrome just below 1,000 feet and at about 200 miles an hour with our front and rear gunners letting loose their full fire and the bombs exploding in our wake. With different-coloured tracer bullets coming up and our own tracer bullets going down, it was like a gigantic firework display.

Unfortunately we lost one aircraft. Two others were badly damaged but got home. The pilot of one of these aircraft was wounded in the left side and the left shoulder and his second pilot got a splinter wound in the head. The tail gunner was hit, too. The second pilot wanted to relieve the more seriously injured captain of the aircraft but they dare not risk changing places because the control trimming gear, which enables you to trim the aircraft to fly itself for a short period, had been damaged. To make matters even worse, the hydraulic system had been put out of action, so that they were faced with the prospect of having to land, not being able to let the undercarriage down. They made the three-hour flight in the dark through very bad weather with heavy rainstorm and unusually bumpy conditions to reach their base.

Reaching home, the pilot circled the aerodrome three times, waited until everything was ready down below. Then he put the machine down on its belly. They deserved to get away with it—and I am very glad to say they did.

In the other machine the navigator was shot in the chest. The second pilot attended him and gave him morphia. Having done that, he took over the injured man's chart and maps and navigated the aircraft home.

The next day we were standing by for another attack on Stavanger, but it was eventually decided to postpone the raid until dawn the following morning. We had to wake the pilots and crews in the middle of the night and they took off in the small hours of the morning, while it was still dark.

In the weather conditions we were expecting I had been doubtful whether it would be possible for the machines we were sending to keep formation in the dark. I did not want them to go in separately and stir up trouble for one another. But the captains of the aircraft were dead keen to go. They said they could do it; in fact, they almost tried to bully me into sending them. At first they were able to fly with their navigation lights on. That's all right, but as they got nearer Norway their lights had to be put out.

After that, flying over the North Sea in darkness, the pilots of the two following aircraft managed to keep formation by watching the exhaust flames from the leading machine. When they arrived off the Norwegian coast it was too dark for them to find their target with any degree of accuracy, so they hung about for half an hour—keeping well away and out to sea—until the light improved.

The Germans opened fire as soon as the aircraft came into attack. The machines dived to about four to five hundred feet. Their front gun raked the enemy aircraft on the ground and the bombs, aimed at the runway, the aircraft and the hangar, began to fall. In addition to attacking the aerodrome we shot up their seaplane base there on both these Stavanger raids.

Two incidents occurred during these operations which, I think, will give you some indication of the spirit of our crews. In one case the number of aircraft originally detailed for the job was cut down by one. The captain of the aircraft ordered to about what had happened, but most of the fellows seemed to have been so impressed by the beauty of the Norwegian scenery that at first it was difficult to get them to talk about anything else.

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The other incident concerns a sergeant pilot who was unable to get off with his formation because of some slight trouble with his aircraft. He practically begged me to let him follow in another plane. I said "all right, provided you can catch up with the others before you run into the danger zone, you may go." Within a few minutes, he and his crew had transferred to another aircraft and taken off.

# ATTACK ON GERMAN CRUISERS IN NORWAY

### BY A BOMBER SQUADRON LEADER

It was in the late afternoon that we set off across the North Sea to carry out our attack. The weather going over was good, but when we got there the sky was absolutely cloudless.

We approached the Norwegian coast at a height of 7,000 feet, flying in two sections of three machines each. Then when we were about ten miles from the harbour where the cruisers lay I gave the prearranged signal for the second section to detach itself from mine and to take its position astern and to our right.

By this time we could see the two cruisers. I told the leader of my other section to attack the one which was lying at anchor near the shore while, for our formation, I chose the one in the middle of the harbour.

The ships and the shore batteries had opened fire during our approach, but none of our aircraft was hit. We went in to attack in line astern, making a steep dive from 7,000 to 1,000 feet. The aircraft followed one another quite closely.

At about 1,000 feet I gave the order to my bomb aimer to release his bombs. Owing to a misunderstanding however we flew right over the ship without letting them go.

It happened like this. I was anxious that my bomb aimer should not drop his bombs too close together so I said to him before we started: "Don't pull your lever over too quickly, but take your time from me. As I say "bomb . . . bomb . . . bomb", let them go."

Well, he must have got a bit excited. We were all excited of course at the idea of getting in our crack at the cruiser. Anyway, he mistook my "bomb—bomb—bomb" for "Oh—Oh—Oh," thinking I had been wounded, and didn't release his bombs.

The only thing to do was to have another shot at it. For about ten minutes we cruised up and down one of the fjords, hoping that the enemy would think we'd gone home. But, unfortunately, this little ruse failed because there were some guns on top of the cliff. They spotted us and apparently decided to have a little practice at our expense.

We were flying then at about 100 feet above the water and they were shooting down on us. They came pretty close but didn't hit us. By now the other chaps had carried out their attacks and had left, so we decided after a few minutes that it was about time to make our second attempt.

We climbed up over the mountains to about 5,000 feet, and approached from the land side instead of from the sea as we had done before.

This time, of course, being alone, we were the gunners' only target and they gave us a really hot reception. By now, too, the cruiser was under way and making for the open sea.

Again we went down in a steep dive at over 300 m.p.h. Accurate bombing with the aircraft being shaken by shell bursts is very difficult. I'm afraid we didn't get a direct hit, but we came within twenty feet of her.

It was now dusk, and having dropped all our bombs, we decided to follow the others and make for home.

One might have thought that the day's adventures were over then, but there was still another to come. For, shortly afterwards, we ran into an enemy flying boat, a Dornier.

We were going west and he was flying east, so we turned and gave chase. The minute he saw us, he dived towards the sea.

We dived after him. As we came into range we opened fire with our front guns and he replied with his rear guns. Eventually, we drew alongside where we could bring our other guns to bear.

We must have been flying side by side for about a minute, exchanging shots from about sixty yards range. First his rear guns stopped firing and then one engine was put out of action. Clouds of smoke were coming from it and we could see that the propeller had stopped. He continued for a bit on one engine. Then that stopped too and he went down into the sea. Again we set course for home.

This time there were no further incidents.

When we landed and inspected the aircraft, we found that we had been hit a good many times. There were bullet holes in the wings, fuselage, and the tailplane and a bullet had even gone through one of the propeller blades, but whether this damage was done by the Dornier or by the A.A. fire over Bergen we could not say.

The main thing was that no member of the crew had been hit and that we had got home.

# A RECONNAISSANCE OVER NARVIK

### BY A FLIGHT LIEUTENANT

WING COMMANDER: It'll be a long time before anyone can tell the full story of the Allies' recent expedition to Norway. But one thing can be told even now—that whatever else it has done, the Norwegian campaign has proved once again that the R.A.F. can be relied on to do its job thoroughly under the worst possible conditions.

It was no picnic this work of the R.A.F. over Norway, you can take it from me. Behind the official reports of reconnaissance flights, patrols and heavy bombing raids, there is a remarkable story of men and machines engaged in a struggle in which the odds were with the enemy from the start and not only with the enemy but with Nature as well.

To put it bluntly, the Nazis got there first and having got there by means as ruthless as they were treacherous, they seized all Norway's available air bases. In the circumstances our fighters had only one base—and that an improvised one—from which to operate. That meant that our long distance bombers and long range fighters had to fly all the way from this country across at least 300 miles of sea before they could even get going with their job. But in spite of this our men and machines put up a fine show, and to-night I have brought to the studio a young Dominion pilot who was captain and first pilot of an aircraft which recently returned from the longest reconnaissance flight of the war—from Scotland to Narvik and back. The flight was even longer than those to Posen and Prague; it was certainly by far the longest over the sea carried out by land planes. During fourteen and a half-hours' flying the pilot and crew were only over land for a few minutes.

FLIGHT LIEUTENANT: I am a New Zealander. I come from Northcote, Auckland, and my crew are all members of the Royal

Air Force New Zealand Bomber Squadron. My second pilot, who was a sergeant observer and acted as navigator, comes from Stratford, near New Plymouth, New Zealand; my wireless operator, who was a leading aircraftman, is also from Auckland. The aircraftman who was the air gunner, is also a New Zealander. We came to England last year to collect Wellington bombers to serve in New Zealand. Before we could get back the war started and we stopped on.

WING COMMANDER: So you will be here for a while?

FLIGHT LIEUTENANT: It certainly looks like it.

WING COMMANDER: Well, tell us something about this remarkable flight.

FLIGHT LIEUTENANT: It was all kept pretty hush-hush beforehand. At our home station they simply told us to proceed to another station where we were to collect a Wellington for special reconnaissance work. We flew there and saw the Wellington that had been chosen for our flight. She wasn't a new or special type of aircraft—just an ordinary machine they had been using for training.

WING COMMANDER: What sort of special preparations did you make?

FLIGHT LIEUTENANT: It was an all-night job getting the aircraft ready, fitting the special tanks, loading up with ammunition, trying out the machine-guns, the wireless equipment and those hundred-and-one gadgets needed for navigation, then we flew to Scotland where we were told to be ready for a take-off the next morning at daybreak.

In Scotland we made our final check up and filled up with petrol and oil. Our navigational equipment, by the way, included bomb-sight and drift-sight, sextant, compasses, charts, pencils, rubbers, dividers, parallel rules, protractors, and so on.

WING COMMANDER: What sort of men were picked for the crew?

FLIGHT LIEUTENANT: The whole crew was interchangeable. Everyone had to be able to do everyone else's job, even to piloting at a push, for there was no automatic pilot in the aircraft. We also had with us a Lieutenant Commander from the Navy to assist in identifying ships at sea.

WING COMMANDER: How did you guard against the chance of a forced landing in the sea?

FLIGHT LIEUTENANT: We carried a collapsible rubber dinghy safely tucked away behind the engine. Then what happens is this: If we have to use it, we pull a wire which forces the dinghy out of the aircraft. It is immediately inflated automatically and ready for use, complete with its own supply of distress signals.

WING COMMANDER: And what do you carry in the way of food in case you are forced down?

FLIGHT LIEUTENANT: Mostly "hard tack"—tinned beef, sardines and chocolate. Before taking off we removed the oxygen bottles from the aircraft because we didn't intend to hit the heights. That meant a saving in weight.

WING COMMANDER: You had cameras with you, of course?

FLIGHT LIEUTENANT: Yes. We had two cameras on board, one for vertical pictures and the other for oblique pictures. The next morning at dawn we were told what the job was—we were to reconnoitre the Norwegian coast to the Lofoten Islands and the Vest fjord to Narvik.

WING COMMANDER: What time of day was it when you started off?

FLIGHT LIEUTENANT: We took off in the early morning, flew once round the aerodrome and then out to sea in a bee-line for Narvik. We skirted the Shetland Islands at a steady speed of nearly 200 miles an hour, and we were soon out of sight of land.

It was a bumpy day. We ran into some extraordinary weather with heavy rain squalls, and finally, just as we were coming near the Norwegian coast we headed into a snowstorm. For quite a while our instruments were registering twenty-seven degrees of frost.

As we came in sight of the Norwegian coast we got ready—ready for anything. The wireless operator manned the front gun; the second pilot took over at the astro-hatch, acting as a fire-control officer, and the rear gunner took his place in his turret.

Norway at that moment looked all covered in deep snow, but still it was land and any sort of land was welcome.

WING COMMANDER: I can quite believe that.

FLIGHT LIEUTENANT: Our real work had now begun, although the weather was steadily getting worse. There was a high wind by now and we were flying in and out of snow and sleet about 3,000 feet above the sea. There were such terrific bumps that the gunners bumped their heads as they were thrown upwards out of their seats.

Just as we were going towards Vest fjord we met an enemy aircraft but he sheered off as soon as he saw us. We flew up the fjord through driving snow at only 200 feet. The clouds and cliffs seemed to be closing in on us, and when we got to the end of the fjord we swung round, made a sharp turn and went on with our reconnaissance southward down the coast as far as Christiansand, then we turned for home.

WING COMMANDER: How did you manage about food and drinks all this time?

FLIGHT LIEUTENANT: Well, up to this time we were too busy to bother about our rations and too excited. Now that the job was done we passed round hot coffee and sandwiches. We had six flasks of coffee with us, beef and ham sandwiches, chocolate, biscuits, chewing-gum, a packet of tea, six bottles of water, a billy-can and a "Tommy" cooker.

WING COMMANDER: On the way back—what happened?

FLIGHT LIEUTENANT: Not very much. That is to say nothing worse than bad weather. We sighted British Naval units in the North Sea, circled round them and exchanged signals by lamp. We were able to give them news of a couple of British destroyers and a merchantman we had seen at the entrance to one of the fjords. All the way home we had a strong wind against us and we were glad to see the Shetland Islands again. The flight covered well over 2,000 miles and the second pilot and I before we finished had shared between us fourteen and a half hours at the controls. As soon as we landed we were given hot drinks before we began to make out our reports and had the photographs we had taken developed.

WING COMMANDER: It was a very fine show all round.

*June*, 1940

# A FIGHTER SQUADRON OVER FRANCE

### BY A SQUADRON LEADER

I AM the leader of a squadron which has been helping the B.E.F. We have gone up daily from quiet aerodromes in England to fly over the Dunkirk beaches.

Day after day we saw the smoke from the innumerable fires of Dunkirk blowing down the Channel. It followed the coast like a gigantic piece of black cotton-wool. And we knew that beneath it, the B.E.F. were fighting their tremendous rearguard action. We could see the hundreds of little ships which were helping them to escape. At one moment we'd be smelling the fresh-cut grass of peaceful English fields and looking at the lupins in front of the mess. Half an hour later we'd be in the thick of it.

Thirty German bombers and fighters have been shot down by my squadron and quite a large number crippled, though we did not actually see them crash. Two of my flight commanders have been awarded the Distinguished Flying Cross.

I suppose our best and most exciting day was when we had a "brush" with a bunch of Messerschmitt 109s—our first combat with enemy fighters. We got two at about 1,500 feet.

That was in the morning. In the afternoon we were standing near our aircraft—we landed for a short time in France—when we heard aeroplanes overhead, above the clouds, which were at roughly 5,000 feet. Suddenly we heard machine-gun and cannon fire coming from "upstairs".

We leaped into our Hurricanes to join in. We raced up towards the fight, but before we had reached the cloud base, I saw two Messerschmitt 110 fighters come streaming down in flames through the clouds. Each was without tail and rudders.

As soon as we came above the clouds we ran smack into a hectic battle. There was a large number of Messerschmitts and another squadron of Hurricanes were doing their stuff.

The moment I came through the clouds I saw a Me. 110 with a Hurricane on its tail about 200 yards behind. The Messerschmitt flew right across my sights. I swung slightly round and delivered a quarter attack, hit him, and then left him to the other Hurricane to finish off.

I looked round quickly to find a target, and it was a good job for me that I did. There was another Me. 110 right on my tail, ready to give me the K.O. I don't think I ever moved so quickly in all my life. I pulled the stick back hard, went up and round as swiftly as that Hurricane would get round, and found myself a second or two afterwards immediately behind the Me. I had simply outmanœuvred him, thanks largely to the way you can pull a Hurricane about in the sky.

I immediately blazed away at him. It was nice range and a short burst was sufficient to send him streaking down in flames through the clouds out of control. We bagged eleven out of twelve that afternoon without losing one of ours. Later the same day we had another scrap in which we got a Heinkel 111 bomber and a Me. 110.

Then there was one other day when we had an enjoyable dog-fight with a squadron of Me. 109s. We were accompanying two other fighter squadrons over Dunkirk and my squadron had orders to "sit tight upstairs". A huge formation of Heinkel 111s escorted by Me. 109s, arrived at the same time.

We played ducks and drakes with them. It was not long before seven of the enemy's fighters were going down in flames. The rest turned tail and limped for home, leaving the bombers to the mercy of our fighters. Although they greatly outnumbered us, the bombers soon panicked. They unloaded their bombs anywhere, mostly into the sea. I have never seen anything like it. There was no attempt to hit anything, though there were ships about.

One of my pilots who had some ammunition left went down and shot two of the Heinkels into the sea and when we got safely back to our base our only casualty had been a pilot with a bullet through his foot.

We cleared the sky of Germans in twenty minutes. It was a grand day.

*June*, 1940

# A FIGHT OVER THE SEA BETWEEN HUDSONS AND MESSERSCHMITTS

### BY A FLIGHT LIEUTENANT

I WAS the leader of a flight of three Lockheed Hudsons on a reconnaissance patrol the other day.

We were suddenly attacked by a flight of German Messerschmitt fighters, which came screaming down out of the sun.

We dived towards the sea in order to prevent them from getting beneath us and to allow our rear gunners to get to work.

The Messerschmitts had the advantage of being faster than we were, so we remained in tight formation and dodged and twisted to break up their attacks. They were flying up behind us, shooting as they came, and then breaking away on either side to turn and renew the attack.

Our Lockheeds were going hell for leather.

I was wrenching the stick right over from side to side and keeping the engines at maximum boost the whole time. The air-speed indicator was showing about fifteen or twenty miles an hour more than the maximum claimed by the American manufacturers. Even then I had something in hand, because, as leader, I had to make sure that the other two were keeping up with all I was doing.

The nose cannons of the Messerschmitts were firing at us all the time. Puffs of smoke came from them with unpleasant regularity, like someone hurriedly blowing a lot of smoke-rings.

In all we had fifteen attacks from each of them. Then they ran out of ammunition and went home.

Our Lockheed Hudsons were still flying as well as ever, although the attacks had lasted for more than half an hour. By that time we had led them about 150 miles from land, and there is just a chance that the Messerschmitts would not have enough petrol to get back.

When we landed, we found that only one of our Lockheeds was at all badly hurt. It had received two cannon shots in the wings, one in the cabin, and one in the tail.

Quite a lot of metal skin was blown off the wings, but the flying performance was very little impaired. One shell had come from behind, ripped through the wing to the main spar—and exploded there. The upper and lower surfaces of the wing looked like a sort of colossal nutmeg grater. By a stroke of good luck neither the flap nor aileron controls were affected. We tested the engines of all three aircraft. There wasn't a thing wrong with any of them.

Another trip my flight of Lockheeds had was a bombing raid to Hamburg, in Germany.

There was plenty of moonlight and acres of searchlights and buckets of A.A. fire, which nearly turned night into day. As we came near the oil tanks, which were our objective, we were about 15,000 feet up, and the A.A. shells were bursting in clusters of white lights around us. These seemed to float steadily in the air, in groups of half a dozen or so, and then go out.

We flew through several puffs of smoke, all the time diving, climbing and turning to get out of the searchlights. Their glare prevented me from seeing the horizon, and we might have been on our heads or our heels.

Then I spied the moon through the side window, and used it as a guide. Sometimes it was high above us, and sometimes it seemed to be below us, but it always helped us to get back on an even keel.

Every now and then the Lockheeds would shudder violently as another shell exploded close by. We could hear shrapnel pounding into the fuselage with a sound like throwing a handful of stones sharply into a pond.

The wireless operator, who had been looking out of the observation dome, had a lucky escape. He had gone back to his seat for a few moments when a lump of shrapnel tore straight through the cabin from one side to the other—just where he had been standing.

We dropped our bombs beside the target and saw a fire break out before we sprinted for home.

Suddenly we smelt petrol.

I tested the tanks, and found one of them was losing fuel rapidly. Fortunately there was enough to get us back.

When we landed, we had more than a score of shrapnel holes in the aircraft.

Then we had quite a successful reconnaissance flight with bombs on board. Again we crossed the North Sea.

We could not see the water because of fog. It lifted a little near the enemy coast, and we ran into broken cloud with a few showers.

Suddenly we saw the German-occupied harbour below us. Several German supply ships were at anchor there, so we dived through the clouds for a thousand feet and dropped our bombs. As we shot back into the clouds, our rear gunner shouted into the inter-communicating telephone that we had scored a direct hit on one ship and left it burning furiously. There was a lot of A.A. fire and pom-pom fire about, but it never touched us.

I am sure I am speaking for all the Lockheed Hudson pilots I know when I say we consider that they are first-class aircraft for the job of reconnaissance. They're comfortable to fly in, with plenty of space to move about, and there are practically no draughts. Naturally they have their limits when we are forced to use them as fighters or bombers—which is not work for which they are built—but we think they are fine kites. We are proud of them.

# THE STORY OF AN AMERICAN FIGHTER PILOT WITH THE R.A.F.

*An American-born fighter pilot tells something of his experiences and excitements he's been through while serving in the R.A.F. He has shot down eight enemy aircraft and badly crippled three or four more, and for these feats he was awarded the D.F.C. yesterday. He is a Flight Lieutenant and his squadron has shot down more than fifty enemy planes.*

I WAS born of Welsh parents in Bernardsville, near Morristown, New Jersey, in 1913. My father ran a big farm there. I went to school first at the Morristown High School, and when we left there for Connecticut, I went to the Gilbert School in Winstead, Connecticut. We lived for a long time in New Hertford, Connecticut, and I have many friends over there. I left the United States when I was about eighteen or nineteen years old. My parents who had gone out to America two years before I was born, came back and settled down in Bridgend, South Wales. I went to Cardiff College to study wireless for a while, and after doing this and that for a year or two, I took a short service commission in the R.A.F. That was in 1936. I was posted to a fighter squadron immediately I had finished my training, and here I am, still a fighter pilot, and liking it more and more each day.

I got my first German in November, 1939. It was the first enemy aircraft to be shot down in the Straits of Dover in this war. I was on patrol between Deal and Calais, leading a section of Hurricanes from my squadron when we spotted, at 12,000 feet, a Dornier 17 "flying pencil". He was about 2,000 feet below us, and as we hadn't seen a German machine up to then, we went down carefully to make sure. We soon recognised him as an enemy, and as I turned to attack he tried to attack me. My

Hurricane quickly outmanœuvred him, I got on his tail, and gave him three sharp bursts of fire. Another member of the section got in three bursts too, as he dived towards the clouds. The last I saw of him was just above sea level. He had turned on his back, and a moment later crashed into the sea. When we got back to the mess we were handed a parcel. It contained a bottle of champagne—with the compliments of the Station Commander. You see it was our first fight—and we'd won. In those days, one German aircraft was something to celebrate.

We went over to France on May 10th, when Hitler invaded the Low Countries. We went up that same afternoon. That time we didn't see anything, but the next day we really started. We carried out three patrols east of Brussels, and on the third patrol we saw three Heinkel 111s. We shot down one, and badly damaged the other two. The day after that, we got two Heinkel 111s, one of which was credited to me. I shot mine down from 12,000 feet.

All the same, those skirmishes were child's play to what was to come later. On May 14th, after we had escorted a number of Blenheim bombers into enemy territory, we were on our way back when we saw three Dornier 17 Flying Pencils. It was a trap; for when we gave chase to the Dorniers, we suddenly found ourselves in the middle of between fifty and sixty Messerschmitt 109s and 110s. I was leading the flight that day and when I realised how hopelessly outnumbered we were, I gave orders to the boys to sort out their own targets and not to keep formation.

We broke up and began to set about the Messerschmitts. I got four Me. 110s, and other members of the flight got four more. On the way back to our base, I saw two Heinkel 126s, one of which I shot down, and damaged the other with the rest of my ammunition. It was a good day. We routed an overwhelming number of enemy fighters, beat up two of their Army reconnaissance planes, and we all got home safely. Our bag on that day was six. There were six of us, so we averaged one each.

There were several other days when we ran into heavy odds of enemy fighters. It is really amazing, looking back, that we should have had the success we had. But it certainly was a success each day. We never ran into the Germans without shooting some down. When we were patrolling Dunkirk, for instance, giving protection day after day to the B.E.F. we always got a few. I remember once, when we found ourselves in the thick of six squadrons of Me. 109s and 110s, we saw an unusual type of enemy fighter. They were the new Heinkel 113s. Naturally we couldn't resist the appointment. We got one of each type, and three or four of what we call "probables". I was attacking an Me. 110 when I suddenly realised that there were six Heinkel 113s on my tail. I made a very quick turn to get away from them, and then shot down the Heinkel 113 on the extreme left of that particular formation.

That was in the afternoon. We had an "appetiser" before lunch, when we met twenty Heinkel 111 bombers. I got one. He went down in flames. And others of the squadron got their share.

The smoke from innumerable fires in Dunkirk and other French coast towns was terrific about that time. A fellow pilot described it as being like a gigantic piece of cotton-wool lying right across the seashore, following the coast down the Channel as far as he could see, even from two or three miles up. There were times when we found that same smoke of great assistance in outwitting enemy fighters.

One of our squadron, for instance, used up all his ammunition in shooting down two Me. 110s one day, and found himself being chased by two more. Without ammunition he could do nothing, so he dived into the smoke over Dunkirk. He emerged above the smoke a few miles away, and there the Messerschmitts were still waiting for him. They simply stuck above the smoke waiting for him to emerge, a victim for their guns. But he outwitted them by diving back into the smoke and was able to slip away home, only to be off again into battle the same evening.

We were stationed in France for eleven days. I remember that, when we went away, the roses were in bud; and when we came back they were in full bloom. In between we'd had eleven glorious days of action, but it was very hard work.

*June*, 1940

# THE WORK OF AN ARMY CO-OPERATION SQUADRON IN FRANCE

### BY A WING COMMANDER

I THINK I may say that the work of our Army Co-operation squadrons during the fighting in France and Belgium was of the utmost value. Broadly speaking, our job is to find out about enemy concentrations and movements either behind the front or in it, the existence of bases and trenches, the effect of artillery fire on targets, and to take photographs. Photography is a very important part of our job; camouflage, for example, may easily deceive the eye, but not the camera. Information obtained is then quickly passed back to the Army either by means of wireless or by messages dropped in little leaded canvas bags. And then the Army does its stuff.

Reconnaissance often entails flying very low over the enemy to obtain results and machines are almost bound to be damaged by A.A. fire. The very first morning we established contact with the enemy one of my people had to go down to fifty feet to obtain the information he needed. He got it and got away. On another occasion I remember seeing one of our machines come back with one of its ailerons completely blown away and the pilot practically without any kind of control. But somehow he managed to land successfully, and after all-night work by the ground staff the wing was changed and the aircraft ready to fly again next morning.

Another pilot of my squadron once found himself up against no fewer than six Messerschmitt 110s. He was flying quite alone, but by putting his machine into a steep spiral and so losing height rapidly to almost ground level managed to evade the Germans. Actually, although he ended up within only a few feet of the ground he contrived to return to our lines by hedge-hopping, dodging round church spires, and wriggling past various power cables and other obstructions. While all this was going on, his gunner was busy and shot down one of the Messerschmitts in flames and so badly damaged another that it flew clean out of the combat.

One day one of our pilots was observing the forward movement of the enemy while British troops were being withdrawn, when he noticed in the distance German advance guards on bicycles, pedalling frantically along one of those long straight Belgian roads.

The temptation was too much for our pilot, so down he dived at the cyclists, directing his front guns on them, and had them in such quick confusion that the leaders fell or were knocked off their machines. The result was that those in the rear ran into those in front and in a moment or two the whole road was a seething mass of overturned cyclists, most of them cursing, all of them trying to struggle into the nearest ditch. Then, as the aircraft rose again, the rear-gunner had a crack at them as well.

In all the Corps Squadrons we have a very large number of airmen attached to artillery and other Army units to work the wireless receivers. On one occasion a party under a sergeant was detailed to the awkward job of holding up the enemy who were crossing a bridge. They managed it so well with their rifles that an Army officer described the incident to me as being worthy of the best British infantry, which I think was a pretty high tribute to men who are not trained as infantrymen at all. Others during the evacuation of Dunkirk helped actually to fire guns, and all of them assisted the Army units just as if they had been soldiers. On one occasion when a column of our transport was being heavily attacked from the air one of our operators saw a Bren gun which was not being manned. He at once jumped on the lorry and fired the Bren gun at a Heinkel and brought it down in flames with his first shot. He told me afterwards that the cheering which greeted his exploit lasted for some minutes.

Besides this type of work squadrons of the Lysanders helped the ground troops greatly by dropping supplies of all kinds, including water and ammunition, on besieged garrisons, such as Calais and did so usually under the heaviest of enemy A.A. fire and the continual pestering of enemy fighters. Yet I believe I am right in saying that only one package dropped from the air fell outside the area occupied by our own forces—which says a great deal for the accuracy as well as for the determination of the pilots who dropped them.

I don't know whether we will have to do this work over here, and if we do we have had pretty good practice at it.

# THE MAASTRICHT BRIDGE RAID

### BY A SERGEANT OBSERVER

*A few weeks ago the first V.C.s of the war in the air were awarded for the blowing up at Maastricht by R.A.F. bombers of two bridges of the utmost strategic value to the enemy.*

*A call was made for volunteers for this desperate exploit and not a man held back. Of the fifteen who went out only one returned. Days later, however, another survivor turned up. All hope for his safety had been abandoned. He is the author of the following first-hand account of the attack.*

I SUPPOSE as a sergeant observer I ought to be able to give a good picture of that raid—and afterwards. But I doubt whether words could describe what really happened.

As you probably know, the two bridges at Maastricht should have been blown up on the night of May 11th, but for some unknown reason they were left standing. It was absolutely necessary that the bridges should be destroyed, for they were the only route open to the enemy, and I am quite certain that their eventual destruction by the R.A.F. did much to slow down the German advance.

Our squadron leader asked for volunteers, and there is no need for me to tell you that not a single one of us hesitated. I wasn't there at the actual time, but when I arrived my pilot told me he had put my name down. I am glad he did.

We had been up since three in the morning, and as we had a pretty strenuous time ahead of us my pilot decided on a few hours' sleep—but not before we had studied our maps and plotted out our route.

Maastricht was about 100 miles away from our aerodrome, but from the preparations we made for the journey you might have thought we were off on a journey across miles of uncharted land. We are thorough about all our routes, of course, but the vital importance of this raid made us even more careful. It was absolutely essential that we should not waste any time in finding the bridges and it was absolutely essential that they should be destroyed.

Five aircraft set out on the task. One flight of three were detailed to destroy the larger bridge and the other two bombers—in one of which I was the observer—had the smaller bridge to deal with.

We were given a fighter escort of three aircraft which cheered us up, but unfortunately we were not to have their company for long. When we were about twenty miles from our target thirty Messerschmitts tried to intercept us, but we continued on our course while the three fighters waded into the attack. The odds were ten to one against us, but even so several of those Messerschmitts were brought down. And so we arrived near Maastricht. All the company we had was more enemy fighters and heavier anti-aircraft fire.

The Messerschmitts attacked us from the rear. The first I knew about it was when our rear gunner shouted: "Enemy fighters on our tail. Look out, Taffy." Our pilot turned and took evasive action whilst the gunner shot one of them down. That seemed to frighten the others, for they soon sheered off. The barrage was terrific, the worst I have ever struck, and as we neared our target we saw the flight of three bombers, now returning home, caught in the thick of the enemy's fire. Later on all three were lost.

The big bridge looked badly knocked about and was sagging in the middle. It had been hit by the bombs dropped by the three bombers ahead of us. When we delivered our attack we were about 6,000 feet up. We dived to 2,000 feet—one aircraft close behind the other—and dropped our load. On looking down we saw that our bridge now matched the other. It sagged in the middle, and its iron girders were sticking out all over the place. Immediately after we had dropped our bombs we turned for home, but the barrage was there waiting for us. It was even worse than before, and it was not long before our aircraft began to show signs of heavy damage. Soon the rear-gunner shouted: "They have got our tanks," and as it looked as if the machine would soon be on fire the pilot gave orders to abandon aircraft.

The rear gunner jumped first. We saw nothing of him after that, though we believe he is in hospital somewhere. Then I jumped. The pilot remained with his aircraft and managed to bring it down safely. When I jumped we were near Liége. On the way down, I saw I was going straight for the Meuse, so I pulled my rigging cord on one side, altered my direction to make sure of falling somewhere in the town. But as I came near the ground I saw a reception committee waiting for me. Hundreds of people were dashing from one street to another and all were pointing at me. As I got nearer I realised that the mob was angry: they were shouting and waving their fists. I then began to wonder whether the river wouldn't be safer after all, but, by that time it was too late to change my mind.

I landed in a small cottage back-garden. Before I had time to disentangle myself from my gear the crowd rushed into the next door garden and dragged me over the fence shouting: "Salle Boche", which means "Dirty German" and other insulting remarks. I shouted back: "Je suis Anglais," "I am English," but either they didn't believe me or didn't understand my French.

Soon they had dragged me into the street where there were hundreds of people waiting. Men and women held my arms and an angry old man got ready to shoot me. Again I shouted: "Anglais," "Anglais," and I am glad to say somebody must have thought it just possible that I was telling the truth.

The old man was prevailed upon to hand me over to the police. On the way to the police station burly women kept on trying to hit me. Then suddenly, out of the blue, I was spoken to in English by a Belgian woman who offered to act as my interpreter. I was grateful to her. She persuaded the police to send me to the Commandant of the Liége Fortress. She believed my story, offered me hospitality, gave me a bicycle and a map, and put me on the road to Namur. It was a long and adventurous journey—but that's another story.

*June*, 1940

# BRINGING DOWN A NIGHT RAIDER

### BY A FLIGHT LIEUTENANT

TUESDAY'S was the first night raid over our part of the coast. When the enemy were detected I was ordered to go up and look for them between midnight and 1 a.m.

I flew around, peering into the gloom for some time, seeing nothing more than an occasional searchlight-beam snooping about the sky. I had almost begun to think that the Huns had managed to get away, when I suddenly spotted, a long way off, flashes from the ground and in the air.

"A.A. fire," I thought; "that means the enemy."

So I went over to have a look, and when nearly there saw a Heinkel sliding across the sky, really beautifully floodlit by our searchlights. A.A. fire was going off absolutely all around us. It really was a magnificent sight. After all, I had what you might call a ringside seat.

I can imagine the feelings of the chaps at the other end of the searchlight beams (and the feelings of the Ack.-ack. gunner too), turning the handles and twiddling the knobs—in action at last on their first night's raid—the first time searchlights up this way have had a chance to catch the enemy. You see, we can always have fun flying, whether the enemy comes round or not, but the searchlight and A.A. boys have to sit there in the open, wet or fine, and just wait. But that's by the way.

Well, now they really were at it. There was a simply terrific fireworks display in progress. The Heinkel looked to me rather like a puzzled old woman suddenly caught in the spotlight. I had come up more or less from behind and there he was just ambling and not quite knowing what to do.

As a matter of fact, I imagined the pilot was pretty well dazzled with all the lights on him.

I got into position right behind and just below, and got my sights on him and pressed the gun button. A shower of sparks flew out of the enemy, and clouds of smoke, and he wobbled a bit.

Then he went down in a slow spiral dive into the darkness. That is the last I saw of him, though I did catch the glare of his incendiary bombs on the ground. He must have jettisoned them as he dropped.

You feel more of a lone wolf during this night fighting than you do by day. We operate more on our own, but of course with our allies the guns and the searchlights.

I expect you have wondered as you watched searchlights at work how much good they would be. As a matter of fact, we have wondered, too, what real chance they have of lighting up the raiders without lighting *us* as well.

We have now had our answer. The co-operation between the air and ground defences really was a hundred per cent.

# A VETERAN PILOT RE-VISITS FRANCE

### BY A PILOT OFFICER

Wing Commander: I hope you will forgive me this evening if I bring in a personal note. For I'm going to introduce to you an old friend of mine. Actually we were learning to fly together in 1913 before the last war. We trained together at the civil schools at Hendon on some of the curious and primitive machines of those early days—the comic box-kites and the funny little monoplanes which if they got off the ground at all staggered along painfully at about fifty miles an hour—rather different from the Wellingtons and the Hurricanes of to-day. But all the same, as you will hear later, it seems to have been quite a useful sort of training. Well, this friend of mine served all through the last war as a pilot in the R.F.C. and the R.A.F., and in 1918 ended up as a Wing-Commander with the D.S.O., the M.C. and the D.F.C. for his distinguished services.

Although he left the R.A.F. after the war he kept up flying and from then onwards took an active and prominent part in civil aviation. Then, at the beginning of the present war, although now fifty years of age, he felt that he was still capable of doing a useful job of work in the air as an active pilot, so he joined up again in the R.A.F.—but this time as a pilot officer, the equivalent of a second lieutenant. How far he was justified in doing this you will be able to judge for yourselves from an account he is going to give you of an exciting incident in France in which he took part the other day and for which he was awarded a bar to the D.F.C. he had won twenty-two years ago.

Pilot Officer: There were a good many of our aircraft in France about this time, standing by to meet the requirements of hard-pressed squadrons. Sometimes, extremely rapid evacuation had to be carried out and it wasn't always possible to get spare pilots for these aircraft at a moment's notice. Nor was it always possible to take airmen off operations to look after repairs. What we had to do, therefore, was to send out small detachments from home to do repairs and, when necessary, fly the aircraft back to England.

My job was to look after one of these relieving parties at Merville. It was a fine morning when we left England. The pilot and I chatted about the weather, and then, as we flew over France, about the pathetic streams of refugees cluttering up the roads below us. The pilot was one you all know. He is one of the many in our civil air merchant-service whose almost daily deeds are thrilling the Empire and gaining the admiration of their brothers in the Royal Air Force.

As we passed over the wooded country towards St. Omer, popping noises began to interrupt our conversation. At first we thought we were passing over French practice rifle and machine-gun ranges. But soon tracer bullets began shrieking up at us, and the pops became very sharp and nasty cracks. It was only then that we noticed about a dozen German tanks on the roadway under some trees outside a village. We could see quite plainly the Nazi swastika marked in black on a white circle covering the tops of the dull brown-and-green tanks. As we swooped over them, just over the tree-tops, the crews hurriedly drew some camouflaged netting over their markings. Then we caught sight of motor vehicles and troops who suddenly began diving into the ditches and firing at us. We flew lower still and hurried on.

When we got to Merville, the fleet of civil air transport quickly unloaded their food and ammunition and left again for England for more. The rest of us settled down to servicing the Hurricanes we'd come to rescue and soon the first was away in spite of it being badly riddled with bullet-holes.

The next one took longer, but by midday we were able to offer a fresh mount to a pilot who landed on us unexpectedly by parachute. He'd just had a desperate fight high overhead, thankfully accepted our offer and was soon off to rejoin his squadron on a strange mount—much to the astonishment of his flight sergeant.

It was soon lunchtime. We had a lovely chicken stew, with many vegetables, made for us by a sergeant of a Northern regiment who had become detached from his unit after a scrap with the Jerries, together with ten lads from somewhere round about Sunderland. The sergeant was in fine form. So far, he told me, this war had just been his cup of tea. Later in the afternoon I discovered why. For while refugees wandered up and down the road according to the direction from which the nearest gunfire and sniping seemed to be coming, there he was, joining in the Bren-gun carrier section and having a crack at the He.s and Me.s when they came too near to be healthy. It was a fine sight.

Just as we'd got the third Hurricane going, I was surprised to see one of our own aircraft leave a busy little dogfight, streak down towards us and drop the familiar little message-bag, telling me to bring the next serviceable Hurricane back home to England before nightfall. It was a strange sight in the sky—with a Tiger Moth and an Autogyro, bringing back sharp memories of peacetime flying, now floating around absolutely unconcerned on their message-carrying jobs. You might have thought they were helping the police to handle the traffic on Derby Day!

I was glad of this message to bring the Hurricane home for more reasons than one. The main reason, I think, was that—well, I wanted to test a theory. The theory is that having once been taught to fly by the R.A.F., it doesn't much matter what type of aircraft you're asked to handle—provided you remember to turn all the taps and push and pull all the knobs of a modern aircraft in the proper sequence, and have the good sense to enquire about the aircraft's peculiar habits from someone who knows her ways. Simple enough—if you have time. The unfortunate part about it was that I just *didn't* have time.

To cut a long story, the Merlin engine of my Hurricane took me off in grand style. Soon it throbbed gently into top gear. The boost came back, and the wheels came up and soon we were all set for Home, Sweet Home. I was above, in the air, without a care in the world—except that I was flying a machine I'd never handled before.

Soon I was to be disillusioned. Not long after the take off, the nasty "noises off" started. Then tracer-bullets began coming down at me from the hillsides. Foolishly I shot up to about 8,000 feet to sail straight into a perfect pattern of horribly noisy black A.A. bursts. An entirely unorthodox manœuvre got me sideways and down out of this, but not before the keen eye of the Messerschmitt flight commander had registered and dived to the attack simultaneously. The strip he tore off shook me more than the A.A. gentleman had done a few seconds previously, and I slipped inwards towards the nasty noise and steeper down, changing the direction to meet the second strip from Number Two, from the other side, and wondering what the other four lads were up to above and behind.

Thereafter, as I had not had the time or means to get the Hurricane's guns serviceable, the chase went on up the village street and down a château drive and once almost through the château front door, until suddenly, twisting downstream in a wooded valley, I slipped out clear over some sand dunes and out to sea, where the fleet off Boulogne opened up on the pack at my heels. One salvo was enough for them, and I climbed up leisurely and thankfully and perhaps a little regretfully to look back at the smoke of battle round Calais and Boulogne, a weird picture in the misty red light of the setting sun, and on the other side of me at the quiet peaceful countryside of Thanet. Then, home to roost, as I had done so many times twenty-five years ago, thinking of my son and his regiment somewhere inland from Dunkirk, and wondering what kind of miracle could save them all, and if the people at home had any real picture in their mind's eye of the scene so close to them on the other side. The refugees, the burning villages, the noise and smoke of battle, and how they would stand up to the onslaught if and when it came and would they remember the defeat in Flanders with no less honour than the victories which will follow in the last rounds of their fight for freedom.

*July*, 1940

# FOURTEEN HOURS IN A DINGHY

BY A FLIGHT LIEUTENANT

We were a few miles off the Dutch coast on our way back from a big raid over Germany when the port engine of our aircraft cut. We had plenty of height at the time so I told my wireless operator to send out a broadcast to say we were returning on one engine. After ten minutes' flying, however, the starboard engine started missing and we began to lose height. When we were about 3,500 feet I told my operator to put out an S O S and sent the crew to their emergency stations.

There was very low cloud at the time we came out at about 500 feet. It was raining, and we did not actually see the water until we almost hit it. We tried to put the aircraft down on the water as gently as we could, but a rather heavy sea was running at the time and we hit a wave and the aircraft nose-dived in and went under. Three of the crew got out of the front hatch over the pilot's head, but the remaining three escaped from the hatch in the centre of the aircraft. It wasn't too easy for them. The others were actually under water and I could see them clutching the fuselage and trying to haul themselves up.

When we had all got into the dinghy we discovered that the rear-gunner had the wireless aerial wrapped hopelessly knotted round his neck. We had no pliers but somehow the navigator managed to lay hands on a knife with which we cut the gunner free. After four and a half minutes the aircraft went down.

The first thing that happened when we got into the boat was that the chaps got cramp. The first half hour was hell. We then decided to chuck off all the clothes we could spare. We threw away our shoes and flying boots, except the best pair, which we used as paddles and for baling out the dinghy. At the time heavy sea was running and drizzle was falling. It was a tough job getting the dinghy balanced. One of us lay in the bottom of the boat and five sat round the edge.

I was very pleased to discover that the navigator had had the foresight to salvage the Very pistol and three cartridges.

It must have been about seven o'clock in the morning when an aircraft which we took for a German flew over us. We fired a Very light but it took no notice of us and went on. Two hours later another aircraft, this time a British plane in search of us, flew straight over the top of us, but despite our signals did not see us. We then discovered that the Very cartridges had become swollen owing to the water and we had to spend about half an hour tearing off pieces of cardboard until we eventually got one to fit the pistol.

We tried to steer a course due west hoping to reach England by paddling with the shoes, when at eleven-twenty we sighted another aircraft coming straight towards us. We waited until he was close and then fired a Very light—our last one, which the pilot spotted. He dived over us and then we recognised the machine as one of our own squadron. He circled round us for about two and a half hours and now and then sent messages with a signalling lamp saying that help was coming. But help didn't come until about four o'clock in the afternoon when we spotted an R.A.F. speed-boat coming towards us. Two and a half hours later we were landed.

It was a pretty thick fourteen hours I can tell you, but somehow or other we managed to keep our spirits up, even after we discovered a leak in the dinghy and had to get the front gunner to stick his toe in it.

The rear gunner sang to us for an hour and a half without stopping—Scottish songs, and finished up by swinging them. We also had a sweepstake as to what time we should be picked up, which was won by the wireless operator. Unfortunately, he was hours out—on the wrong side. But I still think the longest hours were whiled away by an argument we had about the wireless operator who said he had been born with a caul and therefore couldn't be drowned—even though he could not swim. He was right after all.

*July*, 1940

# BOMBING THE *SCHARNHORST*

### BY A SERGEANT AIR-OBSERVER

*The speaker is a Sergeant member of an air crew. He joined the R.A.F. on February 6, 1939. He has been on active service since the outbreak of war and is regarded as one of the most experienced men in his squadron.*

My job is that of air observer, which means that I am navigator, bomb aimer, and front gunner. There are five of us in the crew, and our routine work is long distance night bombing.

We were ready to start as usual on Monday night, but when we reported for final instruction we found that a new job had been arranged. Information had come through that the *Scharnhorst* was in a floating dock at Kiel, for repairs, and we were to bomb it.

We all had a feeling of general jubilation. We were glad to have the job.

When the time came, with the good wishes of those who had to stay behind, our squadron got into the air very quickly. I gave my captain the first course to steer, and soon we were on our way, climbing through heavy, wet cloud. The temperature dropped considerably and was actually below freezing point, but apart from that it looked as though the weather was going to be good to us.

We crossed over without incident until we reached the enemy coast, when searchlights fingered the sky without finding us.

By this time it was a very clear night and we could see water reflections sixty miles away. Visibility was excellent. We flew on over enemy territory, meeting occasional A.A. fire and searchlights but we ignored them and picked up the part of the eastern coast line we were looking for, and with our maps pinpointed our exact position. Then we flew on to our target—the floating dock and the *Scharnhorst*.

Everything was very quiet. The estuary was plainly marked, and as we approached we spotted the German balloon barrage, but still no ground defences were in action.

It was now dead midnight. Just at that moment we saw the A.A. batteries open up on another of our aircraft that was making its attack. We located the position of the defences and decided how we would go in. We were flying fairly high. When we were in position, I gave the Captain the word "Now, sir", and he replied with "Over she goes", and, shutting off his engine, dived to the attack.

I directed my line of sight on the floating dock, which stood out sharply in the estuary, and gave necessary correction to the captain. Searchlights caught us up in the dive, but we went under the beam. Then I had to put the captain into an almost vertical dive as we came on the target. The *Scharnhorst* couldn't be missed; she stood out so plainly.

By this time a curtain of fierce A.A. fire was floating around us. The defences seemed to be giving everything they had got, and I could clearly see tracers of the pom-pom on the deck of the *Scharnhorst* at work. Besides that, the shore batteries and other ships in the harbour were doing their best to blow us out of the sky.

We took several heavy jars from exploding shells. The lower part of the starboard tail plane was blown away, the main spar was hit, we got a two-foot hole through the tailplane, which broke a rib, and narrowly missed our rudder post and we had another hole a foot wide through the fuselage.

The rear gunner said he expected to be launched into space any minute, because he felt sure the turret had been shot away. He gets the worst of the jolts back there and, on pulling out of a dive he swung through a much wider arc. But still everything held together, thanks to the splendid material and fine workmanship that went to the making of our aircraft.

We came down very low to make sure, and when we were dead in line I released a stick of bombs. At that moment, I could only see the ship—gun turrets, masts and control tower. A vast sheet of reddish yellow flame came from the deck, and what seemed to be the heart of the *Scharnhorst*, right from the edge of the dock across her. The flashes lit the whole estuary, and while we banked to go over the town it seemed as though I was looking up at other ships anchored in the estuary.

We had finished bombing and went off, pursued by A.A. fire, and then circled for height over the quiet waters of the harbour. While we were doing this, we could see fires breaking out on the dockside, and our own comrades going in, one after the other to do their stuff. We saw their bombs exploding dead in the target area. The fires got bigger, and there were a lot of explosions that seemed to come from the middle of the fires until they merged into one vast inferno. One explosion outdid all the others and it was probably either an ammunition dump or oil tanks.

When we began to climb we realised the damage that had been done to us, and so, on reaching height, I gave the captain a course for home. But while we were still over the estuary at only about 1,000 feet, a German A.A. ship opened fire. I turned my front gun and pumped about two hundred rounds at him and he ceased fire.

We flew on down the enemy coast. The rear gunner was chattering all the time something about the fires. We didn't get what he meant at first, but when we were over the coast we turned the aircraft so that we could have a look and we actually pinpointed the position, from which we could see it—I don't mean see the glow in the sky, but the actual fire. This distance was eighty-five miles. Then we sent a signal to base, giving our position and telling them that the aircraft was damaged so that they would know where to search for us if anything untoward did happen.

That was the last message we were able to send as we flew into a storm which earthed the aerial and the radio went up in smoke.

Still, damaged as we were, after crossing three hundred and fifty miles of sea, we struck our point only three miles off our bearing; and came quietly home and made a smooth landing. We were bubbling over with excitement at such a successful night's hunting—a bit tired but pretty certain that the *Scharnhorst* will be unserviceable for many months to come.

*July*, 1940

# A NIGHT FIGHT

### BY AN AUXILIARY SQUADRON LEADER

*The following story of a night combat is told by a young Squadron Leader of the R.A.F. who was awarded the D.F.C.*

NIGHT fighting is a fascinating game. It is rather like a game of rather noisy hide-and-seek or, better still, it is just like a game my brother and I used to play some years ago. We used to climb down into a large maze of stone quarries near our home and then start stalking each other. Our ammunition was sharp stones and the loser the first one to be hard hit. We used to play for hours wriggling on our stomachs slowly gaining a good position and then a hard throw. My brother could throw a cricket ball almost a hundred yards, so the tension was considerable.

The other night at midnight the operational phone rang and I received orders to patrol a certain line. As I ran out to my fighter plane I could hear the sirens wailing in a nearby town. There was no moon and quite a lot of cloud.

I took off and climbed through the clouds. I was excited, for I had waited for this chance for the previous three nights, sitting in a chair all night dressed in my flying clothes and one of those yellow painted rubber life jackets which we call Mae Wests. They are painted yellow so that if we are swimming for hours we can be more easily seen in the water. I had waited from dusk to dawn but nothing whatsoever would come our way, but this night they obviously were coming.

I climbed to my ordered height and remained on my patrol line. After about an hour I was told by wireless that the enemy were at a certain spot flying from N.W. to S.E. Luckily I was approaching that spot myself. The searchlights which had been weaving about beneath light cloud suddenly converged at a spot. They illuminated the cloud brilliantly and there silhouetted on the cloud flying across my starboard beam were three enemy aircraft.

I turned left and slowed down slightly. One searchlight struck through a small gap and showed up the whole of one plane. I recognised the plane as a Heinkel 111. One of the enemy turned left, I lost sight of the other. I fastened on to the last of the three. I got about one hundred yards behind and below where I could clearly see his exhaust flames. As we went out of the searchlights and crossed the coast he went into a shallow dive. This upset me a bit for I got rather high, almost directly behind him. I managed to get back and opened my hood to see better. I put my firing button to fire and pressed it. Bullets poured into him. It was at point-blank range. I could see the tracer disappearing inside but nothing seemed to happen, except he slowed down considerably. I almost overshot him, but put the propeller into the *full fine* and managed to keep my position.

I fired again in four bursts and then noticed a glow inside the machine. We had been in a shallow dive and I thought we were getting near the sea, so I fired all the rest of my ammunition into him. The red glow got brighter. He was obviously on fire inside. At five hundred feet I broke away to the right and tried to follow but overshot, so I did not see him strike the water. I climbed and at a thousand feet pulled off a parachute flare. As the flare fell towards the sea I saw the Heinkel lying on the water, a column of smoke was blowing from his rear section. I circled twice but there was no movement; no one tried to climb out so I turned and flew for home.

*July*, 1940

# THE OBSERVER CORPS WAITS FOR THE ENEMY

### BY A MEMBER OF THE OBSERVER CORPS

IT is midnight at one of the posts of the Observer Corps near a small country town somewhere in England. I am one of the crew on duty. My mate has just said it isn't a bad night but he wishes it were a bit warmer. And so do I, for I call it decidedly chilly, even for an English midsummer. It's dark, too, for the waning moon has not yet risen, and the stars don't seem to have much brightness about them.

We came on duty at ten o'clock, just as it was getting dark, and since then we've been watching the skies and listening, as we have watched and listened since the war began. But the night is quiet. The wind has blown away the rain-clouds which threatened a wet night, and has now died down. My mate and I discuss the prospects of a raid. He thinks it most likely that Jerry will come over a bit later on—when the moon rises.

Suddenly our telephone bell rings. A message from headquarters: "Keep a sharp lookout—we're expecting a spot of trouble." My mate and I stand-to with increased vigilance. But all is quiet. A little breeze brings the scent of new-mown hay across the meadows. The river murmurs as it wanders below us on its way to the sea. All is as it has been for centuries—the war is a thousand miles away.

The bell rings again. This time the voice at the other end is a little more explicit. Jerry, the gentleman who drops the bombs, is definitely about. Certain figures and directions are given, and on the map we are able to trace his course from the spot where he last disclosed his unwelcome presence. The telephone is very busy now, and we hear our neighbouring posts take up the tale as they pick up the sound of the raider and pass him on to the next post, and the next. Still we can hear no sound of him—he is too far away yet. Suddenly the air-raid sirens—a melancholy sound at the best of times but in the dead of night a most depressing performance. And when they have died away we are able to listen again. Our nearest neighbour now has the raider within his hearing, and, on the telephone, we hear him reporting the track of the plane across the sky. Will he come towards us? we wonder. At last we hear him, but he is still a long way off and our neighbour hasn't finished with him yet. Faintly and intermittently at first, then louder we hear him and finally our neighbour passes him on to us. And now *we* start to track him; we hear him quite plainly now. There's no gunfire yet, but we can picture the anti-aircraft gunners behind their guns waiting for the moment when he comes within the probing beams of those searchlights. On and on comes the raider—a lone machine, we decide. Suddenly there's a flash and a report and a light in the sky. He's dropped a bomb—and another—and another.

My mate and I are very busy now. It is vitally important that every movement of the raider should be followed and reported, and we watch and listen for every change in his height or direction. Ah, he's turning now, coming straight towards us—his engine becomes suddenly louder. On he comes, louder again now, turning again till he strikes his course for home. Fainter and fainter grows his engine, and at last we pass him back to our neighbour, a little regretfully. We had hopes he would have shown himself for just one moment—just long enough, as my mate puts it, for the boys to crack off at him. But he is a long way from home yet, and he has many perils of British fighters and anti-aircraft guns to face before he can say he is safe. On the telephone we hear him being passed on from one post to the next.

Before long the sirens sound again—this time the long sustained note of the "all clear". Gradually the sound of activity in the little town beneath us dies away. The worthy country folk return to their beds, and my mate and I settle down once again to our routine job of watching and listening.

*July*, 1940

# AIR BATTLE OVER THE CHANNEL

### BY A FLYING OFFICER

*The following description of one of the biggest air battles since raids on this country began is given by a young Fighter pilot who fought in the battle. He is a flying officer and was recently awarded the* D.F.C. *On Wednesday he destroyed one Me.* 109 *and helped to destroy a Dornier* 215. *His squadron that day shot down their fiftieth enemy aircraft.*

I suppose many people who watched the air battle from the shore saw a lot more than I did, although I was in it. As you can imagine, you don't see anything but your own particular part of the show when you are actually fighting.

Our squadron was ordered to fly to the spot where ships were being attacked.

In a few minutes we had reached the scene. We were at 8,000 feet, the clouds were about 2,000 to 3,000 feet above us, and below we saw very clearly a line of ships and a formation of bombers about to attack.

The bombers were between 100 to 200 feet below us. There were twenty-four Dorniers altogether and they apparently intended to attack in three ways. The first bunch of bombers had already dropped their bombs when we got there and the second formation was about to go in. The third wave never delivered an attack at all. It was a thrilling sight I must confess, as I looked down on the tiny ships below and saw two long lines of broken water where the first lot of bombs had fallen. There were two distinct lines of disturbed water near the ships and just ahead were fountains of water leaping skywards from bombs newly dropped. In a second or two the sea down below spouted up to the height of about 50 feet or more in two lines alongside the convoy.

Our squadron leader gave the order to attack. Down we went.

He led one flight against a formation of bombers and I led my flight over the starboard side. It was a simultaneous attack. We went screaming down and pumped lead into our targets. We shook them up quite a bit. Then I broke away and looked round for a prospective victim, and saw, some distance away, a Dornier lagging behind the first formation. I flew after it, accompanied by two other members of my flight, and the enemy went into a gentle dive turning towards the French coast. He was doing a steady 300 miles an hour in that gentle dive, but we overtook him and started firing at him.

He was in obvious distress. When fifteen miles out from the English coast we turned back to rejoin the main battle.

I was just turning round when I saw an Me. 109 come hurtling at me. He came from above and in front of me, so I made a quick turn and dived after him. I was then at about 5,000 feet and when I began to chase him down to the sea he was a good 800 yards in front. He was going very fast, and I had to do 400 miles an hour to catch him up, or rather to get him nicely within range. Then, before I could fire, he flattened out no more than 50 feet above the sea level, and went streaking for home. I followed him, and we still were doing a good 400 miles an hour when I pressed the gun button. First one short burst of less than one second's duration, then another, and then another, and finally a fifth short burst, all aimed very deliberately. Suddenly the Messerschmitt's port wing dropped down. The starboard wing went up, and then in a flash his nose went down and he was gone. He simply vanished into the sea.

I hadn't time to look round for him, because almost at the precise moment he disappeared from my gun sights I felt a sting in my leg. It was a sting from a splinter of my aircraft, which had been hit by enemy bullets. There were some Messerschmitt 109s right on my tail. Just as I had been firing at the enemy fighter which had now gone, three of his mates had been firing at me. I did a quick turn and made for home, but it wasn't quite so easy as all that. My attacker had put my port aileron out of action, so that I could hardly turn on the left side. The control column went rough on that side too, and then I realised that my engine was beginning to run not quite so smoothly.

There were no clouds to hide in except those up at 10,000 feet and they seemed miles away. Practically all my ammunition had gone, so it would have been suicide for me to try and make a fight of it. All I could hope for was to get back home. I watched my pursuers carefully. When they got near me I made a quick turn to the right and saw their tracer bullets go past my tail. I gained a bit on them and then they overtook me again, and once more I turned when I thought they had me within range. I did that at least twelve times. All the time I was climbing slightly and when I reached the coast I was at 2,000 feet. My course had been rather like a staircase. They had not hit my aircraft after that first surprise attack and finally, on the coast, they turned back.

I went on and landed at my home aerodrome, got a fresh Hurricane, and rejoined my squadron before going on another patrol.

# A BOMBER PILOT'S ADVENTURES

### BY A PILOT OFFICER

*This Pilot Officer has been in the service for eighteen months. Aged twenty-two, he was born in Co. Derry, Northern Ireland.*

LONG distance bombing is generally just routine work without incident. Still, most bomber pilots come in for unusual experiences sometimes. Mine came all in a bunch. They began in France towards the end of May when I was the second pilot of an aircraft detailed to bomb bridges over the River Oise and so hold up the German advance.

We started just after dusk, and to identify the target the captain had to come down to about 300 feet. The Germans opened up an intense barrage of anti-aircraft fire which hit the radiator. The engine did not fail immediately, so we bombed at 800 feet and the observer was able to see the bursts on the bridge.

Then we climbed. At 3,000 feet the engine gave out and then, when we were about twenty miles south of Amiens, it caught fire. The captain told us to jump. We did, one after the other, in the dark. The intercommunication system was out of action and the captain had to see us all away before he baled out last of all.

That meant we were all well separated when we got down, but hearing the rattle of refugee carts on the road we all made for the noise, and the captain, the wireless operator and myself met in a little village where we were directed to a house where they spoke English. Reaching the house we found the family packing up to join the unending stream of people on the same trek. The Germans were in Amiens, but we did not know that.

Harried as they were, that family gave us each two raw eggs and a bottle of red and a bottle of white wine before they went. We searched for the aeroplane, hoping to meet the other two members of the crew. We did not find them but found the aircraft burned out where it had crashed. As there was no need for us to do anything more to it, we set off for Beauvais, but changed our direction very soon. French soldiers who had just left the Germans, told us where they were.

So instead we made for Rouen and walked from half-past two in the morning till about one o'clock in the afternoon, along roads crowded with a pitiful procession of refugees in every kind of vehicle, or on foot. Some were in farm carts, some in motorcars that gasped at every turn of the wheel and were so heavily laden that it was a miracle they held together. Others were on bicycles with little carts trailing behind, even perambulators were used. They had been machine-gunned on their way and nearly all of them must have suffered, because whenever an aeroplane—any aeroplane—was heard or seen they hopped into ditches asking us if it were friendly.

At one o'clock in the afternoon we were arrested by a French captain who questioned us closely. When we had satisfied him that we weren't German parachutists he got hold of some milk, bread and chocolate and arranged transport for us to a town about twenty-eight kilometres from Rouen.

That place was expecting an attack and everybody was clearing out, leaving the British troops to do what they could. They were fighting hard and in a tight corner themselves, but they gave us a long drink of lemonade and fixed us up as well as they could.

We went on to the Prefect of Police looking for transport. It seemed hopeless. There was no transport at all, but while we were talking with him a rat-trap of an old Ford—the original T model—was pushed in and the owner begged petrol. The Prefect promised some petrol only if the motorist would give us a lift. We got it, but half way on the journey the Ford broke down. Yet our luck seemed to be turning and we got a lift in an Army ambulance for ten miles, and then an R.A.S.C. wagon took us right into Rouen. The rest was easy—we were taken to headquarters and sent home on a refugee ship.

Our rear gunner got home a few days later. He had been marched what seemed to be half way across France at the point of a bayonet. He, too, had been taken for a parachutist. The fifth member of the crew was probably taken prisoner by the Germans.

A fortnight later, I was promoted to be captain of aircraft and began another series of adventures. On my second raid as captain, we had only been in the air for half an hour when a flare was accidentally let off inside the fuselage and began to blaze furiously. I turned for home.

The second pilot went back to see what had happened and with the wireless operator and observer helping tried to get the flare out, and fight the fire, while I stayed at the controls.

The fumes had carried to the rear-gunner and were choking him so I told him to jump. Shortly afterwards the forward cabin filled so I ordered the rest out and looked round. The fuselage was filled with smoke but the fire seemed to be slowing down. Probably the flare had burned its way through and fallen out. So I decided to try to land. We were only about five miles from an aerodrome and I landed and looked for the crew. They had dropped all over the place, of course, but were all safe. Safe enough, but treated as suspicious characters by the police. In fact they came back in Police escort—parachutists again.

Shortly after this we were detailed to attack a target in the Ruhr and were expecting to sight it at any moment when we were caught in a blaze of searchlights and a barrage of heavy anti-aircraft fire. I could not shake the searchlights off—or the barrage. In fact they were hitting us. We felt a few jolts and one seemed to come flat amidships. The rear-gunner said later that there had been bursts all round us filling the sky with little puffs that showed up in the moonlight.

The only thing I could do was to get out of range, which I did, and went back again to look for the target.

We were off our original track so we made for an alternative objective. Just as I was running up on it a Messerschmitt 109 came at us from behind and below. We were about 9,000 feet up then and the Messerschmitt had us against the moon. It was a beautiful clear night. The first thing we knew was that a lot of stuff was zipping through the aircraft. I had no idea that it was a fighter because as the intercommunication system had been shot away the rear gunner could not tell me.

I continued my run and the burst stopped. Another one came, though, and then I realised it must be a fighter. I turned steeply to port just in time to see the old Messerschmitt going down in an inverted dive. The rear gunner had got him. He had held his fire until the fighter was right on him before letting him have it. Then in the middle of dropping our bombs on the target the starboard engine which had been hit by enemy bullets caught fire.

I gave orders to stand by to bale out, and the second pilot came up and said, "Not so fast. Let's have a crack at getting it out."

We did get it out, stopped the engine, jettisoned the rest of the bombs and headed for home. Nursing the other engine, we reached the Dutch coast at 2,000 feet steadily losing height, so again the crew were given the option of bailing out over Holland or heading out to sea in the hope that a destroyer would pick us up. They've done that before—they're good at it.

I did not know until we were well on the way home that the wireless operator and the observer had been wounded in the scrap, but the wounded wireless operator managed to fix his instruments and the observer got back to take over navigation, while the second pilot looked after the crew in case a quick exit was needed.

Everyone of them decided to go on. They said they didn't want to be a—something—prisoner-of-war, so with each of us at our job we headed out to sea.

Eventually we were down to within 400 feet of the surface and decided to stand by in case we were forced into it. The wireless operator sent out his S O S.

I was at the controls and opened up the port engine further than I had ever dared up to that time in a last effort to make England.

We struggled on for another couple of hours with the wireless operator giving me the course and reached the south coast. As we could not climb over the cliffs we flew along looking for somewhere to come in. Our petrol was nearly gone, the undercarriage and flaps had been damaged by anti-aircraft fire and we decided to come down near the first friendly-looking town we could see.

Ultimately we landed in the sea half a mile from a popular resort. The second pilot threw the dinghy out so enthusiastically that he threw himself out with it. We all climbed in and floated about, waiting for a rescue party, sending up Very lights to indicate our position.

We had already been seen, and almost immediately about twelve rowing-boats were coming towards us with the Police and A.R.P. wardens. They took us ashore, gave us hot baths and dry clothes, soup and tea, and one dear old lady, who had been up all night because there had been an air-raid alarm, cooked us breakfast. The observer who was rather seriously wounded, but is better now, was taken to hospital. We telephoned to our commanding officer, who said, "Have a night in London and come on up"—which we did.

Then I had some leave and went back to routine stuff.

*July*, 1940

# A RAID ON NORWAY

### BY A FLIGHT COMMANDER

I AM a Flight Commander in a Squadron attached to the Coastal Command. We are based in Scotland, and when I was last in London I was actually taken for a Scotsman, but, as you may guess, my home is in Canada—Vancouver, British Columbia—in fact, in some ways, Scotland is quite like home—pine trees, mountains, and plenty of snow in the winter.

We've been pretty busy in the last few weeks with our American-built Hudson aircraft. It's a mixed type of work that falls to the Coastal Command.

We spend most of our time over the North Sea doing reconnaissance work, looking for U-boats, and escorting convoys. These are comparatively peaceable occupations, although you may run into German aircraft doing the same job from the other side.

But sometimes you get an operation which breaks the monotony.

We had a bit of excitement the other day when orders came through for us to attack some shipping in a Norwegian harbour.

Our leader was our Wing Commander and we had a talk in his office before starting, discussing the method of attack, and then we got ready for the flight.

Soon after we left we ran into mist, fog and rain, and had to fly blind for about half an hour. There was a possibility that the bad weather might spoil the fun, but nearer to the Norwegian coast, it cleared.

In the half light the scores of little islands were a greyish-brown colour, with the sea a darker shade. The wide fjord showed up almost black ahead.

We flew into it, keeping level with the tops of the surrounding mountains. We kept on until we had a big, snow-covered mountain between us and the harbour. We skipped over the top of this mountain and flew down the other side so close to the snow that we almost seemed to be tobogganing down it.

In a few minutes we were below the snow level, skimming the rocks and the tops of the pines.

The wing commander was leading, with five of us streaming along behind.

That was just about the moment that the guns opened up on us. Batteries on the mountain-side behind started firing down from above, and anti-aircraft posts on each flank and in front let us have all they'd got. Streams of tracer shells coming at us made a criss-cross pattern all round, and there were bursts of black smoke ahead where the heavy stuff was exploding. It was really a fireworks display, and, actually, it looked very nice—if you were in a position to appreciate it.

Another few seconds, and we were down over the harbour. Machine gunners were shooting from the windows of the hotels on the waterfront. One of our rear gunners sprayed the buildings with bullets as we passed—and the windows emptied like magic.

The guns on either side were firing so low that they were probably hitting each other as we went between them. They didn't touch us and, as a matter of fact, none of our six aircraft was so much as scratched.

The ships we were after were lying at anchor—some against the quays, and some moored in the harbour. We dropped our bombs on and around them and shot off towards the sea. As we looked back, we could see the smoke and flames caused by the explosions.

We had an even more spectacular party over the same harbour, later, when we paid a return visit and blew up an ammunition dump. I arrived by myself, a little early for the appointment, and decided to start the ball rolling. It was very early dawn, and I could just pick out the little huts on the end of the quay which we knew contained ammunition. (I'd seen photographs of them before leaving, taken by another aircraft of the squadron.)

Two of my bombs, and possibly more, scored direct hits on the dumps. We were about 2,500 feet up, but even there the force of the explosion lifted the aircraft as if it were riding a wave.

We went right over the hill and did a right turn and circled back round the harbour to see what damage we had done.

Growing from the remains of the ammunition dump was a huge mushroom of black smoke, going up to 2,000 feet. Its base was a fiery red mass, and higher up it was pierced through and through by flames and pieces of burning debris flying through the air.

Other aircraft which arrived later saw the fire still burning. We all returned from that trip safely.

Another job was the occasion when we bombed a group of enemy warships. To give honour where it is due, I must raise my hat to the German naval gunners. We were flying at 15,000 feet, but they kept planting their heavy ack-ack so close to us that we could see the flash of the bursts before the smoke appeared (the burst has to be VERY close for you to see more than just the smoke). We could feel the aircraft vibrating from the explosions. It was continually jerking, as though it had been kicked by a giant. All six of our aircraft were hit by bits of high explosive shell, but we all got back to our base—and I might mention as a tribute to the maintenance staff that the six were all flying again the next day.

On one of our raids in the north of Norway, we used the Midnight Sun to light us to our objective, which was an aerodrome. We dropped numbers of high explosive and incendiary bombs on that occasion, and left several fires behind us.

Perhaps our most successful attack on an enemy aerodrome was when we dropped ninety bombs in less than a minute. This particular aerodrome had hardly been used, and was tucked into the side of a hill. With infinite trouble, the Germans had built new wooden runways which looked as smooth as a skating rink when we arrived, but were burning merrily after our bombing. We counted forty fires when we left, some of them in the woods where the aircraft were probably hidden, and others in the huts around the side of the aerodrome.

*July*, 1940

# A BOMBING RAID ON GOTHA

### BY A POLISH GROUP CAPTAIN

I WAS most pleased to have this opportunity of being with the Royal Air Force in action for the first time. For me it was very enjoyable and very profitable to have had this experience. The impression that is most strong in my mind is the excellent collaboration of the crew. It was as though they had worked together for years and years. Each one was so efficient and so calm, and all of them most confident and working so smoothly together. I had never imagined that such a high standard could be obtained. As in sport one talks of the team spirit, so in these British Bomber Squadrons they talk of the crew spirit.

On this night we were to bomb the aircraft factory at Gotha. It is here that some of the Messerschmitt fighters and training aircraft are assembled. The factory is also engaged in the production of heavy tanks. When we have set off from our base the navigation is very, very correct and most exact. I am astonished at this accuracy because the conditions are not good and for the most part of our trip we are flying blind in the clouds.

We are going, on this occasion, a little north of the Ruhr. A.A. fire and the searchlights there are very strong and the pilot is all the time manœuvring and varying his height and speed. Several times we have been held by three, four or five searchlights together in a bundle. Some of the A.A. fire comes quite close, making the aeroplane bump about but we are not hit.

Suddenly I hear machine-gun fire from another plane. We are now near Cassel. Just afterwards I hear, three times, firing from the rear of our own aircraft. I cannot see anything because I am in the front. The whole of this lasts a very short space of time. Perhaps a minute—no more. Then the pilot says to me: "One Me. down. Very good." He has the report from his gunner in the rear turret.

We have approached our target and it is quite easy to find the factory because the machine going before us has dropped bombs and we have seen the explosions and the fires from them. Our pilot does a run, then he takes the direction of the factory and we drop our bombs. Afterwards he makes a special turn to see what is the effect of the bombing, and it is possible for me to see bright fires burning. Over the target there is very little firing at us, but coming home we have once more for a period this heavy fire and searchlights. But the pilot just laughs and puts his fingers to his nose at them. He is a very fine young man with great courage, like all of them, and quite without excitement at all this.

Then coming home we have also made some ice on the machine in the clouds. We are blind because the windscreen is covered with ice and that obliges the pilot to come lower down. When we get back to our aerodrome it is raining and visibility is very, very bad, but he makes an excellent landing without incident.

*August*, 1940

# HUDSONS' MILLIONTH MILE

BY A SQUADRON COMMANDER OF COASTAL COMMAND

I AM the Commanding Officer of a Squadron which has just completed a million miles of flying in Hudson aircraft.

A million miles is a long way—about four times the distance between the earth and the moon. Indeed, for most of our flying time, we might have been on our way to the moon for all that we saw of Mother Earth.

We clocked up our millionth mile quite quietly. It happened the other night when we had a number of aircraft out over the North Sea. After they came back we logged up the mileage, and found we were well over the million mark. Incidentally, we've used up enough petrol in those million miles to send a fleet of four hundred family-cars right round the world.

Our work is general reconnaissance—known in the Service as "G.R."—and we are a unit of the Coastal Command of the Royal Air Force. A reconnaissance really means going somewhere to see what is there. But while that is the essence of our job, there is actually a great deal more to it than that. For instance, we do a lot of bombing, and, when we run into enemy aircraft, we have to be fighters as well.

I would like to tell you first something about our day to day work, then about our aircraft, and finally about the men who compose our Squadron. I'm not going to try to shoot a line about hair-raising exploits in which our Squadron has played a part—not because we haven't had plenty, but because that would be putting such incidents in a false perspective. Our work is not spectacular in the main. It is a hard, plodding routine on patrols. Every day, in sunshine, rain or snow we go out over the North Sea to find out what's happening on the other side. With the long days of summer we put in plenty of flying hours, but winter, of course, is the biggest test.

Think of a bare aerodrome in the bleak darkness of a frigid morning, a bitter wind whistling, and perhaps ice on the ground. Pilots, navigators, air-gunners and wireless operator stagger and slither to their aircraft, laden like Father Christmases with their bulky navigation bags, parachutes, flying kit, thermos flasks, packets of sandwiches, pigeon baskets and what-nots.

Flying towards the rising sun, it may be the navigator has just enough light to see the white horses on the grey sea as he lies full length in the nose of the aircraft calculating wind, drift, speed and position. The engines drone on for a couple of hours before the coast of Norway comes into view, or is found hidden in cloud or mist. It isn't uncommon for the crew never to see land in six or seven hours' flying, although they may be so close to the mountains of the Norwegian coast as to be in danger of running into them. If visibility permits, they go into the fjords to take photographs, spot shipping and note anti-aircraft positions and aerodrome sites. Such information is of the greatest importance to Coastal Command, and many a fruitful bombing raid has been made possible by the preliminary reports from my Squadron.

In the early parts of the war the Squadron did a good deal of U-boat hunting. There was scarcely a pilot who had not had a crack at one or more, and our total bag of enemy submarines is quite impressive. Even if a U-boat sees us coming and crash-dives as fast as it can, it may still be within reach of our bombs. They are timed to explode beneath the surface of the sea. Then a shuddering and a disturbance of the water, and masses of dark brown oil coming up. These tell what has happened in the sea below. Other U-boats, which we caught by surprise on the surface, proved easy prey. Some of my pilots have seen their heavy bombs burst right on the hulls.

Now that Germany threatens to invade this country from Norway, our work has become even more vital. If Germany should ever attempt a mass crossing of the North Sea, my crews may well be the first British subjects to find it out. It might be on their reports that the whole of our anti-invasion system of defence would spring into operation.

Please don't think for a moment that a reconnaissance, say, of the North Sea or Norwegian coast is just a question of flying over there, taking a few photographs, making observations, and flying back. I wish it were as simple as that.

But the Germans have established a very excellent system of coast defences, specially designed to keep our aircraft from doing the jobs we want them to do. So we have to look out for such hazards as enemy fighters, patrolling the coast, and anti-aircraft fire which is of an accuracy not to be sneezed at. It is on such occasions that we use our Hudsons as fighters.

To match an aircraft built for reconnaissance work against a modern fighter is rather like putting a retired boxing champion against the newest holder of the title. The fighters have an advantage over us in speed, but we carry pretty useful armament, and our big aircraft can take an enormous amount of punishment.

You would be surprised if you could see the condition of some aircraft which our pilots bring home. One of my pilot-officers—who, by the way, has just received the D.F.C.—is making quite a habit of bringing back what one might describe as a bundle of shell holes held together by pieces of fuselage. I was aghast when I saw the holes in his last two efforts. You could crawl through the gashes in the wings and petrol tanks. In one case the undercarriage folded up as he landed. In the other, although it stayed in position, one tyre was shot to pieces and made the aircraft sink dangerously.

There's no doubt about it, our Hudsons are first-class aircraft for the job of reconnaissance. They have far more room in them than the average Service machine; indeed, there's the same internal space as in the Civil counterpart, the Lockheed 14 airliner, in which some of you have probably flown before the war. There is a row of windows in each side of the cabin, a folding bed, hot and cold air regulator—in fact, every modern convenience. The seats, of course, have been taken out, and there is a gun turret in the tail. The operational performance, too, is exceptionally good. The fact that we use these land-planes so much for long reconnaissances over the sea speaks for itself. Nobody ever worries about engine failure, which used to cause so much anxiety in the last war. A typical remark was made by one of my pilots as he taxied in the other day after a long trip. He turned to his navigator and said: "You'd think these blinking engines would go on turning over for ever."

And now I'll tell you a little about the lads who do this work. They are the advance scouts of our defence system, and they accept gladly the risks of the scout—the danger of running into enemy forces and the prospect of lone flights with the odds against you, where you know that if you survive the fight, you have a long slog back, perhaps damaged, over the sea to your base.

There is little glamour in our work. It is rather like the northern patrols of the Navy—loneliness, monotony, danger of dirty weather. But it is a vital work, and the men of my squadron and other squadrons who do similar work include some of the most experienced pilots and navigators in the Royal Air Force. They have hundreds of hours of war flying to their credit, and many of them have been out on more than a hundred long range operational flights.

They are all grand types, and I should like to make special mention of the sergeant pilots and also of the wireless operators and air gunners, and the ground staff who are an indispensable part of the Squadron.

At nights when I go down to the aerodrome, waiting for the aircraft to come back from the sea, I often think of those in my squadron who have not returned. Their work has gone to build up our first million miles. I know they would wish us luck as we go forward to our second million miles.

*August*, 1940

# BOMBER BAGS A FIGHTER

### BY A CANADIAN PILOT OFFICER

IT was the first time I had ever been chased by German fighters, but the observer and gunner were sergeants of long experience. They were grand and kept their heads well, and I am proud to be in the same crew.

We were on our way home from a daylight raid one day last week. We had already been fired at by A.A. batteries near the Zuider Zee, and apparently the crews of the batteries had wasted no time in reporting our presence to the German fighter squadrons, for we had been heading west for only about five minutes when the enemy fighters caught us up. Two of them broke off and came for us—a Messerschmitt 109 and a Heinkel 112. We were about 6,000 feet up at the time, and as there was no cloud to dodge into, we dived down to nearly sea level so that both of our opponents would be obliged to attack us from above.

We had crossed the coast by this time and they followed us out to sea, both firing, and our rear gunner firing back. For a while we seemed to be doing nothing else but turning either to port or to starboard. After about fifteen minutes of skimming around just clear of the water the aircraft suddenly became rather hard to control, and we found that one of the ailerons had been shot away.

Just about the same time the gunner got the Messerschmitt. He had put in a good burst at him as he was coming up at us from above and astern, about 300 feet up, and the German fighter just put his nose down and dived straight into the North Sea. That left us with only the Heinkel to reckon with, and he stuck to us and continued to exchange bursts with our own gunner.

At this time I was taking evasive action mainly by watching the pattern the Heinkel's tracers were making on the water and banking out of the line of fire thus revealed. The gunner was still giving me directions, but the intercommunication had been damaged, so the observer came and assisted me by making signals with his hands to show me which way to turn. It was quicker than talking and we didn't have much time to spare.

Suddenly I heard a yell of fury from the gunner, followed by an awful volley of language. It didn't take long to find out what had happened. Oil started spraying around in the front cockpit and we knew the hydraulic system had been put out of action. This meant that the gunner instead of being able to manipulate his gun mechanically had to do it manually, which is no easy matter in an aircraft which is making violent movements. Meanwhile I couldn't see much out of the front window which had become smeared all over with oil, but I was trying to keep roughly to a westerly course all the time.

After about thirty-five minutes' chase, the rear gunner stopped firing and called out, "You can take it easy now, sir, he's cleared off". That was a relief and we climbed up from the water to a safer height and made straight for the aerodrome. We knew we were in for what we call a "Belly landing"—that is to say landing on the body of the machine with the wheels up, because with the hydraulic system out of action the undercarriage wouldn't come down.

Having jettisoned a few things that might have added to the danger of landing, we circled the aerodrome several times to warn the ground staff to have the ambulance and fire-engine ready. But they weren't needed for she parked down all right, and that is about all there is to it. Nobody was hurt; and we are still together as a crew.

*August*, 1940

# GATE-CRASHING A GERMAN BALLOON BARRAGE

### BY A PILOT OFFICER OF A HEAVY BOMBER SQUADRON

WE had a bit of excitement a few nights back when we ran slap into the middle of a German balloon barrage. Our luck was in. Not only did we get away with it, but we brought one of the balloons down.

Our target that night was a synthetic oil plant at a place called Gelsenkirchen which is in the middle of the Ruhr. It was a dark night—very dark—and we had come down to about 6,000 feet to find the target. We dropped our flares and located and bombed the works, then we climbed and went back to see what results we'd had. My second pilot was flying the plane. I'd been down in the bomb aimer's position, which is in the nose of the aircraft, doing the bombing.

Suddenly I saw a long dark shape silhouetted against the clouds; then, as the searchlights played across them, I saw three more. They looked rather sinister and they were on the port beam and port quarter about a hundred yards away. By now I'd gone up from the bomb aimer's position and was standing beside the second pilot. I gave instructions to the gunners to open fire at the balloons and we started to turn away to starboard to get away from them. Immediately afterwards the second pilot threw the aircraft into a very steep right-hand turn for he'd seen another balloon coming straight up in front of him. It had loomed up out of the darkness dead ahead and our wing tip just caught the fabric. If the pilot hadn't yanked the aircraft over quickly we should have flown right into it, the envelope would have wrapped itself round the plane, and that would have been the end of the trip, but all that happened was that the aircraft bucked a bit, then there was a terrific explosion which we could hear even above the roar of the engines and I imagine the Germans were minus one balloon, though we couldn't see what happened.

After the explosion, when we climbed up higher, we found we'd been flying along a row of balloons right in the thick of 'em. It was pretty amazing that we hadn't hit a few more, for when we'd been bombing, we must have been among all the cables. I knew there were balloons in the area—we'd been warned about them before we started—but the only way to find the target was to come down fairly low, so we had to take the odd chance. When we examined the aircraft the next day we found it hadn't been damaged at all.

Another raid which I shan't forget in a hurry happened just before this balloon incident. On this occasion we were bombing the railway marshalling yards at Hamm. There's an important railway traffic centre here and it seems to be selected as a target most nights in the week. When we took off, the weather was pretty poor and at 7,000 feet it was freezing. Over the North Sea we struck heavy banks of cloud. I climbed to 14,000 feet, but even at that height we couldn't get out of it—so we just carried on flying through cloud; there was nothing else we could do about it. When we were about fifteen minutes away from our target, the port engine began to splutter and the engine revolutions dropped. This time again I was down in the bomb aimer's position preparing the bomb sight. I realized that we'd probably got ice in the carburetter, so I came back to the second pilot. The starboard engine spluttered and soon both engines ceased to give any power at all. Our air speed indicator packed up, so did the altimeter. We didn't know whether we had flying speed or how high we were. The second pilot and I were flying the machine between us while he was fixing the warm air control which had become disengaged. This is an arrangement by which the air, instead of being sucked straight in, is warmed up by the heat of the engine before being passed through to the carburetter. He'd got both his hands on the warm air lever, forcing it down as far as it would possibly go and he'd got his feet on the rudders while I grabbed the stick, keeping the aircraft on an even keel. I could tell by the feel of it that we were going down very quickly.

We were heavily iced up; the wings had a thick layer of ice on them and one couldn't see through the windscreen because that too was covered in ice. It didn't matter very much about that because it was so dark and we were still in cloud, so we wouldn't have been able to see anyway. I decided that if the engines didn't come on within another four or five seconds, I'd give the order to abandon the aircraft. I'd got the words on the tip of my tongue, when the port engine spluttered a couple of times and began to pick up again. It would still have been impossible to maintain height with the amount of ice we had on the aircraft, but I decided to hang on a little longer before giving the order to bale out. The starboard engine picked up, and after a bit more spluttering, both engines started working normally again.

We flew on for another half minute or so and then the altimeter started registering. I looked at the height and found it was approximately 4,000 feet, that meant that we'd come down in a dive about 11,000 feet. We were just recovering from this when we ran into an electrical storm. The effect was so weird that I began to wonder whether we hadn't arrived in another world. The others said afterwards that they began to think the same thing too. Everything seemed outlined in a blue haze. The propellers made shining spinning circles. The two guns in the front turret were pointing up in the air and there was the same blue haze round them too. The front gunner reported that there were sparks jumping from one gun to another. The rear gunner afterwards said, that for a minute he thought his guns were actually firing and he couldn't understand it. As I looked at the second pilot's face, I saw that it was ringed with blue. The tips of his fingers had the same blue haze around them. It covered the instrument panel and ran along the leading edges of the wings. That lasted about two minutes. It was one of the weirdest experiences I have ever had. I was very glad when we got out of the storm.

We flew on and arrived over our target area. The cloud was still so heavy that it was impossible to locate the marshalling yards, so we turned and came back, and on the way we bombed the alternative military target which had been allotted to us.

Three fighters picked us up near Rotterdam. First of all the rear gunner reported one enemy aircraft apparently trailing us, then he was joined by a couple of his pals. We got all set for a bit of a scrap but nothing happened. They didn't attack and we arrived back at the base without further incident.

*August*, 1940

# STORY OF A FIGHTER SERGEANT PILOT

*Here is a story of one of those fighter pilots you read about quite a lot—a sergeant pilot. This young man—he will be twenty-three next November—has been in the R.A.F. since September,* 1935. *After getting his wings he was posted to his present squadron in August,* 1936. *He has fought with them in France, over Dunkirk, and over the Channel, as well as, of course, over this country. He has been in action at least thirty times, and in addition to many enemy aircraft damaged he has a bag of six definitely destroyed. He was fighting last Wednesday, the day seventy-eight German raiders were destroyed.*

OUR squadron had a very enjoyable time last Wednesday before breakfast. We had a lovely party somewhere off the Isle of Sheppey in the Thames estuary. It was a beautiful morning, and twelve of us were flying very high over Beachy Head. We were told to patrol below clouds over Dover and then we had orders to intercept enemy aircraft between us and the North Foreland. So we went down to about 3,000 feet just below clouds. We turned north and came over the Thames estuary. It was very misty so we went up again above the clouds to about 6,000 feet. The sun was coming up from the east—and so were the enemy. We saw two formations of bombers—two lots of twelve aircraft, one behind the other, with about two miles between them. They were 1,500 feet lower than we were, so we had an immediate advantage. Our squadron leader gave his orders quickly, and clearly, over the radio telephone. He would lead his flight of six Hurricanes round the back of the first formation, and the other flight of six, which included myself, was to deliver a head-on attack.

As soon as the leader of my flight went down towards the first formation, the enemy darted down for the clouds. I should have explained, by the way, that the squadron was in four sections of three each in line astern. The C.O. led the first two sections, and I was leading the last section of three. It is one of the duties of the last section to give warning of approach of enemy fighters.

Anyway, when the Dorniers went into cloud, I led my section down after them, and when we emerged at the bottom of the clouds I found we were ahead of them. So I swung completely round and led a head-on attack on the second formation of Dorniers which had now appeared. I'm sure they got an awful shock. They didn't expect an attack from the front like that. You could see that they didn't like it.

My section came up from below and slightly to one side of the bombers and we blazed away for all we were worth. It was impossible to miss them. We simply sprayed them with bullets, and then we broke away to the left. One of them was badly hit and he broke away. I pounced on him right away, fired from dead astern, and after another pilot had fired at him I believe he went down to crash into the sea.

In a battle you don't often have time to see what happens to every enemy aircraft you shoot at. But you usually have a chance to look round and see what is happening near you. I looked around after my head-on attack and saw a grand sight. My flight-leader was leading his section up at the bombers head-on. I could see their machine-gun bullets spurting from their wings, and I could see the Germans losing their formation under this terrific fire.

After that we began to look for odd enemy bombers which were now wheeling about in the sky and trying to form up together. I went up above the clouds again with another pilot and we saw three Dorniers, looking very sorry for themselves, heading for home. We took one each, and the one I fired at shed a lot of pieces from his wings and fuselage. I saw the other pilot —another sergeant, as a matter of fact—later when he landed. I asked him how he got on, and he said: "Fine! I got him nicely. First the rear gunner baled out and then I saw the Jerry plane go into the sea."

We had quite a good breakfast that morning, for including what we got the squadron's bag contained four certainties and a number of others probably destroyed or damaged.

I think my best day—by which I mean the day I enjoyed most—was one over Dunkirk during the evacuation of the B.E.F. Our squadron was patrolling Dunkirk at more than 10,000 feet—I doubt if our troops could see us at that height—when we saw a formation of about twenty Heinkels 111. High above them were a lot of Messerschmitts 109 acting as a fighter escort. We were told to attack the fighters, but before we could reach them they sheered off, and left the bombers to us. We went down on them like a shot.

I got two of the easiest enemies of my life that afternoon. I dived on one Heinkel and gave him an incredibly short burst of fire. My thumb was still on the gun button when both his engines immediately caught fire. He put his nose down, and to my surprise, I must confess, he went straight down into the sea with a tremendous splash. He just went straight in from 10,000 feet.

I climbed up a bit and looked round. Then I saw another Heinkel going east, having attacked shipping in Dunkirk harbour. I started chasing him, climbing after him all the time. When I got fairly near I just crept up to him—we were doing just over 200 m.p.h.—that is what I call "creeping" in a Hurricane. Anyway, I crept after him for a few minutes and I'm sure he didn't see me until I opened fire from close in. I just let him have it—a long burst of five seconds. The rear gunner opened fire at me almost at the same moment that I started firing. He was silenced immediately, yet he managed to put half a dozen bullets into my aircraft. The Heinkel began to emit black smoke and dived vertically towards the sea. I watched him crash.

There was another day in France when we ran into ten Messerschmitts and only one of them got away. That was a good scrap. If I remember rightly, it was our first morning in France, too.

One afternoon, in France, when on patrol, we saw anti-aircraft shells bursting high above us. I spotted a German aircraft and reported it to the leader of the squadron. He as good as said, "Well, go and get it then, if you can see it". I went up to 15,000 feet and found it was a Dornier 17. I attacked from behind and below and in a few moments the machine caught fire and a second or two later, began a dive which ended on the ground. Then I rejoined the rest of the squadron to continue the patrol. I was just lucky to be the one who happened to see the enemy.

I have about 850 flying hours altogether on my log book, half of them on Hurricanes. As a matter of fact, I have been with the squadron longer than any other pilot. A few have joined since the war, but most of the pilots came in two or three years ago. There isn't one of them who hasn't got a Hun. It's a grand squadron to be in, I can assure you.

*August*, 1940

# ATTACK ON THE DORTMUND-EMS CANAL

### BY A FLIGHT LIEUTENANT

*The speaker is a twenty-seven-year-old* R.A.F. *bomber pilot. A member of one of the squadrons taking part in the exploits which he describes in this broadcast, was this week-end awarded the Victoria Cross for most conspicuous bravery.*

OUR target on this raid was the old aqueduct carrying the Dortmund-Ems Canal over the River Ems north of Münster. This canal is of great importance to the industrial area of the Ruhr. There is also at this point a new aqueduct, but when that was blown up as a result of previous raids the Germans had diverted all traffic to the old one. The operation had been most carefully planned. Five aircraft detailed for bombing, were to slip in and carry out their work. Two of the five, I am sorry to say, never got back.

Timing was an all-important factor. For a reason I cannot mention it was imperative that the five of us should all attack within a very short period.

At three o'clock in the afternoon we were told that we were going and at six o'clock that evening we were given the details of the operation. Aircraft from two squadrons were taking part. Having been there before, most of us knew the place pretty well. The actual briefing of the crews took about three-quarters of an hour. The whole place was carefully gone through with special maps and plans.

We synchronised our watches and the clocks in the aircraft before starting. Everybody got away right on time. Just after we took off, I saw one of the others in the air, but we soon lost sight of him. The timing had been worked out so as to allow us a ten-minute margin in case we got slightly off our course or had any trouble in getting into the target area. My navigator did a very fine job of work and we arrived at a point north of the target with our ten minutes in hand, so we circled round there for a bit.

Going out, there hadn't been any excitement, but we were not looking for trouble anyway. There were clouds on the way over but they cleared beautifully just on the edge of the target. The moon was about half full. We were relying on the moonlight reflecting on the water to give us our direction for the run up.

We being the last of the five were due to go in at 23.23. Two minutes before that time we came down to about 300 feet. We were then still several miles north of the target. Gradually we lost height as we came along the Canal, following its course all the time.

The navigator was in the nose of the aircraft doing the bomb-aiming. Everything was quiet until we got to the point where the Canal forked just before the two aqueducts. I was doing the run up to this point when the navigator was taking over the directing. We must have gone off a bit to the left because he called out "Right", then immediately after, when we had turned a bit to make the correction, he called out "Steady".

Then, suddenly, everything started at once—searchlights and all the anti-aircraft fire. It was unfortunate from our point of view of course, that the enemy knew pretty well the direction from which we must attack. They had disposed their defences so that they formed a sort of lane through which we had to pass. It seemed to me that they had strengthened these defences a great deal since the first raids.

The searchlights were blinding, and we were flying entirely on the bomb aimer's instructions. I had my head down inside the cockpit trying to see the instruments, but the glare made even that difficult. Our instructions were not to rush it too much because of the need for extreme accuracy. Before we started, the rear gunner had asked if he could fire at something or somebody and he was shooting at the searchlights as we went past.

Almost at the same moment as we bombed I felt a thump and the aircraft lurched to the right. A pom-pom shell had gone through the starboard wing. Then another shell hit the same wing between the fuselage and the engine. They were firing pretty well at point-blank range. It was all over in a few seconds. The navigator called out "O.K. finish". Then we turned away again. The ground defences were still after us but the tracer was dying out a bit by this time.

When we had got away and set course for the base the rear-gunner reported that oil was coming into his cockpit. Then the wireless operator reported that the flaps were drooping. I tried to raise them but found that they wouldn't come up. What had happened was that the hydraulic system had been damaged. We discovered too that the undercarriage indicators were out of action.

Not having landed without flaps before I didn't like to try it that night with a crew aboard, so we cruised around a bit doing a few local "cross countries" for about two and a half hours. We waited till dawn and then we came in all right.

*August*, 1940

# A BOMBER SHOOTS DOWN THREE ENEMY FIGHTERS

### BY A SERGEANT WIRELESS OPERATOR AIR GUNNER

*The speaker is a sergeant wireless operator air gunner in one of our heavy bomber squadrons, who was recently awarded the Distinguished Flying Medal for gallantry in operations against the enemy. He comes from Derby. He was the rear gunner in a bomber which was attacked by three enemy fighters. In the engagement which ensued, the sergeant shot down two of them and the third broke off the fight. In the official announcement of the award, reference was made to the "high degree" of skill, combined with clear thinking and quick judgment which he displayed in successfully dealing with this attack."*

IT was on the way back from a raid in the Ruhr that these three fighters had a go at us. We had been flying for about a quarter of an hour after bombing our target when we were picked up by searchlights. I called up the pilot on the intercommunication set and told him that the lights were dazzling me. They held us right across the town of Wesel, which is to the north of the Ruhr; then, on the other side of the town, the pilot finally got out of them.

There was no anti-aircraft fire, so I was keeping a particularly sharp look-out for fighters. Suddenly, tracer bullets started flying past the turret and I saw three fighters coming in at us from the rear. One was coming in from the starboard quarter and below us; the second was above and practically dead astern; and the third was five or six degrees to port, and he—like the one on the other side—was also attacking from below. To me it seemed that all three were converging on the rear turret.

The one on the starboard quarter seemed to be pretty close, so I had first shot at him. The first burst seemed to hit. If you can get your first burst all right, you can usually guarantee to get your following ones in too, unless things are particularly awkward; so I just kept pumping quick bursts into him—six or seven altogether. He was hitting us too. Some of his shots went through the tail plane, the rudder and the wireless mast, and an explosive shell from his cannon hit the armour plating of my turret. I didn't realise at the time that the shell had actually hit us. I thought it had exploded just outside. Anyway I know the bang deafened me for thirty-six hours afterwards.

The fighter got to within about one hundred or a hundred and fifty yards of the rear turret; then he pulled up like an aircraft pulling out of a dive. He seemed to hang there for a bit and I got in a few more bursts right into the belly of the machine. I saw him turn over and then I swung the turret on to the second fighter which had been closing in all this time, firing his four guns. I could see four streams of tracer coming at us. Out of the corner of my eye I noticed the first fighter go down in flames. He exploded in the air or when he hit the deck—I couldn't say which.

This second aircraft was the one which was flying slightly to port. I missed him with the first three bursts, because I was misjudging his speed, but the fourth burst hit him all right and after that I just kept repeating the performance. He was pretty deadly, too, and did further damage to our plane. The navigator got hit in the leg—not badly though—but nobody else was hurt. Then the fighter curled away out of my field of fire and that was the last I saw of him, but the second pilot said he saw him go down out of control.

After this the third enemy fighter came down on us. He closed in to about three hundred yards but wouldn't come any closer. I got a bit fed up with this so I fired a good long burst in his direction and he sheered off. We didn't see him again.

Altogether, I've done just over twenty raids over Germany, but that was the most exciting one of the lot. I've got my twentieth birthday coming along in a few days' time and I hope to be over Germany that night.

*August*, 1940

# WORK OF A BALLOON UNIT

### BY AN AIRCRAFTMAN

"The Commanding Officer congratulates the Flight on the rapidity with which operations were carried out at dawn to-day."

That message was signalled, not so long ago, to the flight headquarters of a Balloon Barrage Squadron on the South-east coast. It was then conveyed personally by the flight commander to the three crews concerned. Their balloons had been shot down at dusk the previous evening, when Jerry had sent over hundreds of planes. The crews had inflated at the break of day, and new balloons were flying well before breakfast, when Jerry came over again. If he had expected to find a gap in the barrage, as I am sure he did, he was sorely disappointed.

The flight was having its "baptism of fire". For months we had been kicking our heels on the Commons and parks of London—flying balloons in all sorts of weather, in frost and snow, in gales and in scorching sunshine—and yet nothing much had happened, a real test of patience if you like. No wonder some of the crews had been "browned off".

Then all at once the war flared up in the South-east. Our flight was ordered to be ready to be off at once. We were mobile again. Twelve months ago we started up the winches and drove out of our centre—yes twelve months ago, all but a week or two, for we auxiliaries were mobilised on August 24th last year. Now we were on the move again. Well, we left our sites on the commons, and before breakfast next morning, Jerry woke to face a balloon barrage on the cliffs—a challenge to repeat his dive bombing if he dared!

Well, in the days I was there he seemed to think dive bombing a trifle too dangerous. But, of course, he was out to destroy the barrage, with his machine-guns, cannons, and bombs. *Our* days of inactivity had ended. The crews soon had to learn all about improvisation. Sometimes a balloon, when shot down, would fall over the cliff into the sea, and could not be recovered.

There were no elaborate beds. Concrete blocks and ringbolts were a memory of quieter days, but one was made out of heavy baulks of timber, around which were bound wire strops, to which the snatch blocks were fastened. For practical ballooning, service under war conditions, on a cliff edge, with the enemy intervening, is the best training for would-be L.A.C.s.

Only the high Command can form an accurate estimate of the military value of the balloon barrage on that coast. All I know is that the civilians gave full marks to the balloons. Jerry did not stop his bombing raids, but he had to fly above the balloons and was dropping his bombs very wide of the mark. Gunners of the anti-aircraft units were not quite so enthusiastic about us at first. One voiced his complaint to me in these words: "Since your balloon men came we haven't been able to have a smack at Jerry." However, I am glad to be able to say that before we left, the gunner had all the smacks at Jerry that any man could desire, and he made good use of his opportunities. Indeed, co-operation between balloons and anti-aircraft gunners was developed with deadly effect. Some of the Jerry airmen were full of courage—let us acknowledge that. They would fly down at the balloons and run straight into the barrage of anti-aircraft fire, paying for their bravery with their lives. It was certainly brave but seemed so foolish, that I can only conclude that Jerry was desperate to get rid of the balloons. I cannot see that he gained much, for even if one German plane shot down as many as four balloons—really a fantastic supposition, for he could never do it—and lost his plane as a result, the price was immense, for whereas we never suffered casualties in personnel with our lost balloons, Jerry and his crew were either killed or taken prisoner. Which seems to suggest that Hitler has not the slightest regard for the lives of his men.

Balloons, it was found, are not so vulnerable a target as Jerry had hoped. It does seem *so* easy to hit a balloon with a machine-gun. But in practice it is not so easy to make a balloon a casualty. Jerry could put a whole burst of gunfire into a balloon, but the bullets went in one side, and came out of the other, leaving only the most minute holes. Then when the balloon came down for the daily inspection and topping up, it did not take long to apply patches of fabric. An ample supply of solution and fabric prevented gas escaping, or purity decreasing. Later Jerry tried small cannon shell, most delicately constructed to explode on the slightest impact, but some of these failed to do so. A word of advice: When one falls near your balloon, and fails to explode, surround it with a wall of sandbags and call in the experts to remove it. Don't touch it yourself if you value your skin.

Our transport men did wonderful work. They hauled the trailers backwards and forwards, over fields, along cart-roads, only yards from the cliff edges, never making a mistake, seeing that every site had sufficient gas to deal with every eventuality. Food and rations went out automatically, under front-line conditions.

It *was* the front-line. We saw much of the Army, the Navy, and the Merchant Service to inspire us. We were proud to wear the uniform of Royal Air Force—colleagues of the brave pilots that fought the Germans almost miles above our balloons. But above all, we were glad that the balloons had justified themselves in fierce aerial warfare. The long hours of training, the practice obtained in the quiet months of waiting, have served their purpose.

In warfare the balloons have stood up to the enemy, and our boys in the crews have proved that they can stand up to everything that Jerry can send over—and get on with the job of helping to win the war.

*August*, 1940

# A HUDSON'S ADVENTURES

### BY A PILOT OFFICER OF COASTAL COMMAND

I was the pilot of a Lockheed Hudson reconnaissance aircraft of the Coastal Command which attracted the unwelcome attention of seven Messerschmitt 109s over the North Sea. The fact that I'm here to tell you about it now is the best possible tribute to the skill of my crew and the fighting qualities of the American-built aircraft we were flying.

We were patrolling near the Danish coast early in the afternoon, flying just below the clouds at about 2,000 feet, when we sighted two enemy supply ships ploughing along in heavy seas. We decided to attack.

Those of you who have seen Hudson aircraft, or their civil counterpart, the Lockheed 14, would hardly believe that these converted air-liners could do dive-bombing attacks. It's rather like an omnibus in a T.T. race. But they *can* do it—and quite successfully, as the enemy no doubt realises by now.

So I put the nose down, straight for one of the ships, and we dived 1,000 feet. We released the bombs as we pulled out, and they fell a few yards ahead of the target. I was busy climbing and turning for another attack, and the observer saw the bombs swamp the ship in foam. They exploded just under its bow, and must have damaged it considerably. There was some A.A. fire at us, but it was weak and inaccurate.

We came round again for a repeat performance, and started another dive. Just as we were whistling down nicely, I got a bit of a shock. Coming towards us from the east was a formation of seven enemy fighters—Messerschmitt 109s. They were in "V" formation, and looked to me like a swarm of angry bees out for trouble. I decided that was no place for a solitary reconnaissance aircraft, and increased my dive down to sea level.

The seven fighters closed on us, and then the fun began. My crew immediately went to action stations. I opened up the engines as we switchbacked and skimmed over the waves. Each time we turned, the wing-tips were almost in the water. The Messerschmitts came up, four on one side of us and three on the other. They were a good deal faster than us, and kept flying in turn at our beams, delivering head-on attacks.

Our guns were blazing away, and I remember looking behind me into the smoke-filled cabin to see how things were going. One thing sticks in my mind. It was our carrier-pigeon, slung from the roof in its basket, looking down at all the racket with a very upstage expression. The pigeon seemed to be saying: "I suppose all this is necessary, but please finish it as soon as possible."

However, the fighters were still going strong and so were we! I kept track of their approaches by glancing over my shoulder. Each time a Messerschmitt approached I gave a slight movement to the controls which lifted us out of the line of fire. I could see the cannon shells and bullets zipping into the water, splashing and churning up foam. . . . Not that we were unscathed! Four holes suddenly appeared in the window above my head, and shrapnel and bullets were coming into the cabin pretty steadily. I was flying in my shirt-sleeves, and had hung my tunic in the back of the cabin. When I took it down afterwards there were four nice clean bullet holes through the back, sleeves and side. I was glad I hadn't been in it!

From the continuous rattle of our guns, I thought we had sustained no casualties, but after about twenty minutes when I looked back I found that the wireless operator, who is a veteran of the last war, had a bullet wound in the arm. But he carried on until the enemy broke off the engagement.

Up till then, I hadn't had much chance of using my front guns. But a change in tactics by the Nazi fighters gave me a chance of getting in some bursts. The seven Messerschmitts weren't getting much change from side-on attacks, so they began to come from ahead. That was just what I wanted. By turning my Hudson at them I got home several hundred rounds.

By this time we were climbing up towards the scattered clouds, where the fighters still continued their attacks and turned the battle into a grim sort of hide and seek. At last we shook them off, and were able to take stock of our position. The fight had then lasted just over half an hour.

The wireless operator came to have his wound dressed by my navigator, and the rear gunner asked permission to leave his turret. When he came forrard we found he had been wounded in the leg and, like the wireless operator, had carried on without saying anything about it.

They had seen most of the fight, and as their wounds were being bandaged I shouted above the noise of the engines, "Any luck?" The gunner held up one finger, then pointed straight downwards and grinned. Then he held up another and pointed slantingly down. This meant that one Messerschmitt had gone down for certain, and he had seen another gliding down to the sea apparently out of control. The wireless operator confirmed our successes.

We had a long slog back to England—about two hours in a damaged aircraft. In spite of the hard tousing I had given the engines they were behaving perfectly, but I knew we would have trouble with the undercarriage. Sure enough, when we tried to put it down to land, it would only go halfway. We signalled to the aerodrome's staff that we were going to make an emergency landing. I sent all the crew to the back of the machine to ease the trim. Then we came in. The wheels supported us a little, and we landed quite sweetly. The wounded members of my crew are O.K.

*August*, 1940

# A FIFTEEN-MINUTE PARACHUTE DROP

### BY A FLIGHT LIEUTENANT

I WANT to tell you of a fight a few days ago, off the South Coast, not only because of the two Messerschmitt fighters which I am very pleased to have sent into the sea, but because of the parachute descent afterwards—my first—and one of the most enjoyable experiences in my life.

It was a lovely evening and the wind was warm about us as we passed through the slip-stream of our aircraft, to our cockpits. We were to patrol the coast at 10,000 feet and we reached the patrol line at this height in seven minutes—I could see for miles and a thin layer of cloud 1,000 feet above us, shaded our eyes from the sun.

We were flying east when three enemy aircraft were seen flying west, in the clouds overhead. I told our leader that I would climb with my flight above the clouds and investigate. As I did this, twelve Messerschmitt 109 fighters emerged from the clouds. Still climbing, I made for the sun and turned and gave the order for my flight to break up and attack. In a moment, our battle began —our six Hurricanes against the enemy's twelve.

The eighteen aircraft chased round and round, in and out of the cloud. I chose my first opponent. He seemed to be dreaming and I quickly got on to his tail and gave him a short burst which damaged him. I flew in closer and gave him a second dose. It was enough. He dived, out of control, and I followed him down to 6,000 feet. There I circled for a minute or two and watched him dive vertically into the calm sea. There was only the tell-tale patch of oil on the water to mark where he had disappeared.

I opened my hood for a breath of fresh air and looked about the sky. There was no sign of either the enemy or my own flight. I was alone, so I climbed back into the cloud which was thin and misty. Three Messerschmitts, flying in line astern, crossed in front of me—so close that I could see the black crosses on their wings and fuselage. I opened fire on number three in the formation. We went round and round in decreasing circles—as I fired. I was lucky again. I had the pleasure of seeing my bullets hit him. Pieces of his wings flew off. Black smoke came from just behind his cockpit. He dived and I fired one more burst at him, directly from astern. We were doing a phenomenal speed—then my ammunition gave out—just as the other two Messerschmitts attacked me. I twisted and turned, but they were too accurate. I could hear the deafening thud of their bullets. Pieces of my aircraft seemed to be flying off in all directions: my engine was damaged and I could not climb back to the cloud where I might have lost my pursuers. Then came a cold stinging pain in my left foot. One of the Jerry bullets had found its mark, but it really did not hurt. I was about to dive to the sea and make my escape, low down, when the control column became useless in my hand. Black smoke poured into the cockpit and I could not see. I knew that the time had come for me to depart.

Everything after this was perfectly calm. I was at about 10,000 feet, but some miles out to sea. I lifted my seat, undid my strap and opened the hood. The wind became my ally. A hand—actually the slip-stream catching under my helmet—seemed to lift me out of the cockpit. It was a pleasant sensation. I was in mid-air—floating down so peacefully—in the cool breeze. I had to remind myself to pull my ripcord and open my parachute. When the first jerk was over I swung like a pendulum. This was not so pleasant, but I soon settled down and I was able to enjoy a full view of the world below—the beach, some miles away, with soldiers—and the long lines of villas in a coastal town. There was no sensation of speed. But the ripples on the water became bigger—the soldiers on the beach became nearer. I had one minute of anxiety. As I floated down, one of the Messerschmitts appeared. The pilot circled round me and I was just a little alarmed. Would he shoot? Well—he didn't. He behaved quite well. He opened his hood, waved to me and then dived towards the sea and made off towards France.

The wind was still friendly. It was carrying me in towards the beach. I took out my cigarettes and lit one, with my lighter—without any difficulty. Ages seemed to pass. I threw away the cigarette as I came nearer and nearer to the coast. I could hear the all-clear sirens—and, passing over the houses on the sea front, I could see the people coming out of their shelters—people looking up at me. I had descended to about 1,000 feet. I began to sway a little and I could hear my parachute flapping—like the sound of a sail in a small boat. The soldiers' faces were quite clear, but I must have looked English, even at one thousand feet—which was comforting.

For the first time since the enemy pilot circled around me, I became anxious. Was I to end my escapade by being banged against a seaside villa? It did not seem possible that I could reach the fields beyond. The journey ended in a cucumber frame—after I had pushed myself free of a house, with my foot.

And now I come to a pleasant recollection—in spite of my foot and my painful landing. The people in that seaside town were wonderful. A woman appeared with a cup of tea—in one second. Then a policeman with a whisky and soda. I drank the whisky and soda first—then the tea. A blanket appeared—then the ambulance. I remember one amusing incident as I was lifted into the ambulance.

A little boy of seven, came over to me with cigarettes and he said, "Good luck, sir. When I grow up, I'm going to be an airman too."

*August*, 1940

# FIVE ENEMY AIRCRAFT IN ONE DAY

### BY A SERGEANT PILOT

*The story of a sergeant pilot of a Fighter Command Spitfire squadron who shot down five enemy aircraft in three air battles on one day. On the same day fifty raiders altogether were destroyed, and two days later the sergeant pilot brought down two more. He is a north countryman—Yorkshire born and bred. His father lives in Harrogate.*

SATURDAY was certainly a grand day. It started, as most days for fighter pilots start—with the dawn. We were up at a quarter past four. I felt in my bones that it was going to be a good day. We were in the air just after five o'clock. Shortly before half-past eight we were in the air again looking for enemy raiders approaching the South Coast from France. We saw three or four waves of Junkers 88, protected by a bunch of Me. 109s above them. We were flying at 15,000 feet, between the bombers and the fighters. The fighters did not have much chance to interfere with us before we attacked the bombers. I attacked one of the waves of bombers from behind and above. I selected the end bomber of the formation which numbered between fifteen and eighteen. I gave this Junkers a burst of fire lasting only two seconds, but it was enough. It broke away from the formation, dived down, and I saw it crash into the sea.

I then throttled back so that I would not overtake the whole formation. I was getting quite a lot of cross-fire from the other bombers as it was, though none of it hit me. If I had broken away after shooting down the first bomber, I should have exposed myself to the full force of the enemy formation's cross-fire, so I throttled back and stayed behind them. I didn't have time to select another bomber target, for almost immediately an Me. 109 came diving after me. As I had throttled back the Me. overshot me. He simply came along and presented me with a beautiful target. He pulled up about 150 yards in front of me, so I pressed the gun button for two seconds. He immediately began to smoke, and dived away. I followed him this time and saw him go straight into the sea. When the sky was clear of German planes, we went home for breakfast. We had a nice "bag" in that combat before the other Germans escaped.

As a matter of fact, I didn't get any breakfast at all. I only had time for a hot drink before we were ordered to stand by again and by half-past eleven that morning we were patrolling the South-east Coast. We were attacked by half a dozen Me. 109s, and, of course, we broke up to deal with them individually. I had a dog-fight with one, both of us trying to get into position to deliver an attack, but I outmanœuvred him. I got on his tail, and he made off for the French coast as hard as he could go. The fight started at 10,000 feet, and we raced across the Channel like mad. As we were going like that, I saw one of our fellows shoot down another Me. 109, so I said to myself: "I must keep the squadron's average up and get this one." I didn't fire at him until we were actually over the French coast. Then I let him have it—three nice bursts of fire lasting three seconds each, which, as you may imagine, is an awfully long time! I started that final burst at 8,000 feet, and then he began to go down, and I followed until I saw him crash into a field in France. Then I went back home without seeing any enemy at all. I carefully examined my Spitfire when I landed, certain that I must have been hit somewhere. But, no, not a mark. It was very satisfactory.

Our third show began just before four o'clock in the afternoon. We were flying towards the Thames estuary at 5,000 feet, when we saw anti-aircraft shells bursting in the sky to the north-east. We changed course, and began to climb for the place where we thought we should meet the enemy. We did. They were flying at 12,000 feet—twenty JU.s 88 in tight formation accompanied by about twenty Me.s 109 above them. They were flying towards the London area and we could see the balloons shining in the sun. When we spotted the fighters we pulled up towards them. I got under one Me. 109 and gave him two bursts. Smoke started to pour out of him, and he went down out of control. Suddenly, tracer bullets started whizzing past my machine. I turned sharply, and saw an Me. 109 attacking one of our pilots. I turned on the attacker and gave him a quick burst. Immediately he began to slow down and the aircraft began to smoke. I pressed the gun button a second time, and the Me. caught fire. I fired a third time, and the whole machine became enveloped in flames and pieces began to fly off. Finally, as it went down, more pieces came off, all burning. As it tumbled down towards the Thames estuary it was really a bunch of blazing fragments instead of a whole aircraft. It was an amazing sight. That was my fifth for the day, and the squadron's ninety-ninth! The squadron brought the score over the century the next day, as a matter of fact. The squadron has damaged a lot more, of course.

There is a lot of luck about air fighting—by which I mean it's a matter of luck whether you get into a good scrap or not. I was right through the Dunkirk show, and didn't get a thing. But recently I seem to have been lucky. These fights are over so quickly that unless you are there right at the beginning, you are liable not to see anything at all. None of the fights on Saturday lasted more than five minutes each.

*September*, 1940

# BOMBING BERLIN

### BY A SQUADRON BOMBING LEADER

*This officer joined the* R.*A*.F.*V*.R. *on May* 2*nd*, 1939, *being called up on September* 1*st*, 1939. *He took a navigation course until Christmas*, 1939, *up to that time being a Leading Aircraftman. He then went for a bombing and gunnery course. Commissioned on the completion of this course, he was given intensive training in navigation and bombing. He was posted to his squadron in the middle of June this year. He has made six operational trips as navigator and bomb-aimer. His official title is squadron bombing leader, and his duties include that of maintaining the bomb aimers in efficiency and knowledge of all new ideas and improvements.*

I MADE my first trip to Berlin the other night. Before that I had been over France a few times, when the Jerries were walking through, and I had made the trip to the Ruhr and to Milan. Berlin was a job I really wanted. Of course, I had no real say in the matter at all: it was just luck. The choice lies with the commanding officer. Anyway, I struck lucky. Lucky, because I am not a regular member of any particular crew. So far I haven't flown in the same crew twice. That happens, as I am the squadron bombing leader, and change about a great deal.

That afternoon, we were given our targets and general instructions, and between the briefing and the time of take off we worked out the details. Soon after dinner we took off, just as day was giving way to night. The light was failing fast as we started on our six hundred and fifty mile outward journey, and by the time we had crossed the odd two hundred miles of sea and reached the enemy coast it was dark.

We had a favourable wind and saw nothing for the hour and three-quarters that we spent crossing the sea. There was a lot of cloud below us, which began to clear as we approached the Dutch coast. There we ran into intense anti-aircraft fire. Heavy bursts in the distance at about twelve thousand feet, with continual flashes, which looked like lightning. It wasn't reaching us and we wondered who was getting the benefit of it. Other aircraft were ahead and it looked as though the gunners were concentrating on them.

From then on, there was nothing at all, until we were over Emden, when searchlights began to show, and to hunt about in the sky. They failed to locate us, and we went round them, dodging trouble.

The captain took over from the second pilot. It is not a difficult operation, changing over, although some people seem to believe that it is like rocking a canoe. All that happens is that the second pilot gets the aircraft dead straight, flying level, slips out of his seat, and the captain moves in.

The rest of the run to Berlin was uneventful. We were there about twenty minutes before midnight.

Searchlights came on, quite a lot of them, and flak. There seemed to be a solid rectangle of brilliant light in the sky. It wasn't coming our way—then, but was making things as difficult as possible for the others who had left a quarter of an hour earlier and were already over the target.

When our estimated time of arrival suggested that we should have arrived, we headed for the searchlights and dropped a flare to see what was below us. We spotted a river, and I had a look at the map to see if it was the one we wanted: there are several stretches of water there. While we were trying to identify it, we were picked up by searchlights at seven thousand feet. They held us, and we moved pretty rapidly, taking very violent avoiding action to get away. We got away, and again dropped flares to pin-point our position. In fact we repeated that operation several times and were again caught by searchlights and heavy anti-aircraft fire. Some of the bursts came too close to us to be comfortable, but we thought we had escaped. I know that we flew through big black balls of smoke that looked like balloons. They were only smoke.

Cloud made it hard to identify the target, and gave us a jolt once. We thought a squadron of aircraft was flying over us.

There were silhouettes in the light, very clear and very sharp. They were our own shadows thrown on to the clouds by the searchlights. A very strange sight, and a very strange feeling, that.

For an hour and a half we flew around trying to make sure. Of course we could have unloaded on Berlin at any time we liked: but—as you know we don't do indiscriminate bombings.

The exact spot still eluded us and the captain decided to come round the searchlights and make a low level attack. So we descended to one thousand feet—over London that would be a few hundred feet above St. Paul's.

We saw fires to the east, caused by other aircraft, and followed the river towards them to come over the target area again, and into a curtain of flak of all colours and descriptions.

We reached the fire, which was now blazing well, and easily recognised the Siemens-Schuckert Works, with railway sidings alongside. We dropped a long stick of high explosives and incendiaries at a little over one thousand feet.

The searchlights were nearly horizontal by now, and the anti-aircraft fire really hot. We could imagine the gunners frantically turning the handles, trying to get their guns to bear on us. Streams of green tracer shells were hosepiping over us as we took evasive action to get away from the target. The captain put the nose down, and we came well below that one thousand feet.

The rear-gunner had meanwhile reported the bursts of our bombs, with fires and explosions in the works as a result. There was a good fire going in the centre, and we had bombed alongside it. Some of our heavy stuff must have landed on the railway. We couldn't miss from that height.

All we could do was done, so we climbed through the clouds to 12,000 feet, and turned for home with the engines running smoothly.

Coming home, there was not much opposition, and the crew had a time for a little relaxation—with hot coffee and biscuits—and perhaps forty winks for some.

The wireless operator was exploring the fuselage and came forward again with a wide grin and his hands full of pieces of aluminium to tell us tales of a large series of holes we had collected over Berlin.

Against the wind we made the North Sea, and flew into the dawn. The wireless operator grew excited again, pointing out quite a large hole in the wing.

Reaching home, the captain spoke to the ground and wished them good morning. We touched down after ten and a quarter hours in the air, had a look at the machine, and found enough holes to give the riggers a spot of work for a while. Nothing had struck a vital part: but another six inches and they would have got the petrol tanks, and then we might have come down somewhere else.

That was that. Then we had our interrogation on the trip; after which we were ready for breakfast and bed. It was a good twenty-four hours since we had been there, but we had had an enjoyable trip between times.

*September*, 1940

# BOMBING BERLIN AGAIN

### BY A FLYING OFFICER OF A HEAVY BOMBER SQUADRON

*The speaker is a flying officer in one of our heavy bomber squadrons. He describes the remarkable scene which followed the bombing of a large gasworks during a recent raid on military objectives in Berlin.*

BEFORE I describe this particular raid I would just like to mention something which gave us in the R.A.F. one of the biggest laughs we've had since the war started. A few days ago we had sent round to us an extract from an Italian paper which made the following remarkable statement: "The R.A.F. succeeded in bombing Germany and Italy by offering to colonial mercenary pilots the following bonuses in respect of every night raid—£500 over Germany. £600 over Italy."

Last night I carried out my twentieth raid over Germany, so at that rate of pay I should now have tucked away in the bank the nice little sum of £10,000. One can only wonder why it is that any Italians should be asked to believe that any pilot in any Air Force—their own not excluded—should need such a fantastic inducement to do what has now come to be regarded, by the R.A.F. at any rate, as a more or less routine job of work. We pasted the extract up on the notice-board in the officers' mess, with a big red arrow pointing to it. It really was too good to be missed.

But if you want a true picture of things in the R.A.F. Bomber Squadron, let me tell you what happened the first time the squadron I belong to was detailed for a raid on Berlin.

The wing commander who commands the squadron called in during the afternoon in the usual way for "briefing"—that's to say, to give us all the details of the operation. Half the squadron, he said, would be on Berlin, the remainder on other targets in

Germany. He asked if there were any captains and crews who had any particular preference for Berlin. Every man operating that night wanted to go, though the wing commander decided that the fairest way to arrange things was to work it out in order of seniority. Some of the chaps started shooting a line about their seniority—trying to pull a bit of a fast one, in fact—but that didn't cut any ice and the whole thing was properly worked out by the two flight commanders. We have an "A" Flight and a "B" Flight.

In the end, however, everybody went, because later in the afternoon, we were taken off the other targets, and all put on to Berlin. I think that most pilots if they were asked for their opinion on the Berlin raid, would say that given moderately decent weather they were quite normal trips. They take longer, of course, than some of the other raids, but distance alone doesn't really make much difference so long as the aircraft can stand up to it as easily as ours do and as long as you have got well-trained captains and crews. In fact, it's precisely the sort of job that we've been trained to do.

Well, how about those gasworks in Berlin. If one's to judge from results actually seen, I suppose it's my most successful trip so far. As a matter of fact, it was the first time I've been to Berlin, though I have visited a good many other places in Germany.

We got a certain amount of A.A. fire on the way out—but nothing remarkable. By the time we arrived there were already a lot of our aircraft buzzing about and flares were dropping all over the place. One could pick out streets and railways, small parks and places like that.

Over the city, the guns were letting off at us pretty heavily, but we were not hit. We found our targets without any difficulty. It was a gas-generating plant only a few miles from the centre of Berlin. Someone else had started two fires in the N.E. corner of it and we ran up from west to east. My second pilot was flying the aircraft and I was doing the bomb aiming. By this time, we were down to 8,000 feet, and I could clearly see the outside of the works.

Perhaps I ought just to explain here, very briefly, how the bombing is done. The bomb aimer is lying flat on his face in the nose of the aircraft looking down through a large glass panel which takes the place of the floor. Allowances have to be made on the bomb-sight for the speed and direction of the wind, the height and speed of the aircraft, and so on; then, when the target comes in line with the pointers on the fore and back sight, the bomb aimer presses the firing switch—and down they go.

On this occasion, when the bombs burst, there were four huge explosions across the works. I think that the first one must have hit a gasometer, as far as I can see; there was no other explanation for what happened. There was a violent eruption upwards and outwards. It reminded me of a scene on the films.

The first four large explosions were followed by series of smaller explosions. Two huge fires started and great tongues of flame leaped up—I estimated that they must have been rising to 1,500 feet—then dense clouds of smoke began to pour out. It was the most terrific sight I have ever seen. The bombs had fallen about fifty yards apart. Almost immediately the fires and explosions seemed to link up and for a distance of 200 yards through the works there was this great mass of flames.

Next I saw our incendiaries fall on the western edge of the plant. They take longer to get down than the heavy bombs. What part of the works they hit, I don't know, but I could see large clusters of brilliant-coloured flashes on the ground. We circled round and watched the fires blazing up. The rear gunner, I remember, shouted: "Oh Boy, it's terrific." The whole of Berlin must have seen them lighting up the sky.

In the light of the explosions I had seen, momentarily, two long buildings and a tower. Then the aircraft passed over and I could not see any more from the front, but the rear-gunner said he saw one of the buildings collapse in flames.

By the time we had circled round twice, the guns were getting a little too close and I gave orders to set course for base. From the beginning of the run-up the whole thing took only five or six minutes. About a quarter of an hour after we had left, we could still see the reflection of the fire in the sky and about this time we made out another terrific explosion. We were not quite certain whether that was somebody else bombing or whether it was the result of our attacks. Well, that's the story of one aircraft on one raid on Berlin. One is not always so successful, of course, but it may give you some idea of the sort of work the R.A.F. is doing over there.

*September*, 1940

# SINKING A U-BOAT

### BY A SQUADRON LEADER
### OF THE ROYAL AUSTRALIAN AIR FORCE

*A dramatic incident in the war at sea was the recent sinking of a German U-boat and the capture of her crew by a Sunderland flying-boat of the Coastal Command. The story is told by the captain of the flying-boat.*

Well, I was ordered to carry out a patrol—an anti-submarine patrol—in a certain position in the Atlantic and my take-off was to be very early in the morning. Whilst I was taxi-ing out I was sent a message to say that a steamer had been torpedoed in a certain position. I was ordered to proceed to that position and search for the submarine and if I saw it, of course, to bomb it. I took off and flew for some hours in the dark. Just as dawn was breaking we found the ship. She was about three miles away. She had been torpedoed aft and was still afloat. I circled round her. She appeared to be in no sort of difficulty and a destroyer was nearby. As my orders were not to waste any time, I then started to look for the submarine.

When I was about thirty miles from the steamer, I sighted a disturbance in the water about five miles away. It looked like a round patch with a wake leading up to it, and I felt pretty sure that it was the enemy submarine. She must have seen me at the very moment I saw her because she did a crash dive. I saw the swirl and prepared to attack it. I turned towards it and carried out a dive at a shallow angle, and released four bombs in a stick. The bombs fell on to the swirl on the surface and overlapped the disturbed water and formed what we call a "tight pattern"—(much the same as good grouping with a rifle). I then did a circuit with the object of coming back to make another attack. During the circuit I saw the submarine break surface apparently at a very steep angle by the bow, giving the impression that she had blown all her tanks in a rush to get to the surface. By the time I had turned the submarine had completely surfaced and I immediately carried out a second attack.

I did the second attack at an angle, slanting across the submarine from the quarter to the bow and dropped another four bombs in a low-level attack. The submarine at the time was still moving forward very slowly under the impulse given by her rush to the surface. Immediately after the second four explosions she swung round violently to starboard and practically stopped. The crew rushed out of the conning-tower and lined up on deck aft of the conning-tower *away* from the gun. This obviously indicated surrender. I saw that the submarine was settling down, first of all evenly fore and aft, but soon, when the decks were almost awash, she adopted a sharp angle and settled down very quickly by the stern. Now, no submarine would willingly go down by the stern in the normal way of diving. So I knew that this was no trick to fool us. She was definitely sinking. The bow rose right out of the water and she sank. The whole thing only took two minutes from the time of the second attack.

As the submarine began to sink under them, the crew jumped into the water. We were quite low and circled round them when they realised the submarine was sinking. There was obviously a wild rush to get overboard. They were all wearing life-jackets and they bunched together in the water so as not to get lost.

Whilst all this was happening, one of my crew sighted an escort vessel in the distance and I signalled it to hurry to the scene and pick up the submarine survivors. I then directed the escort vessel by diving on the people in the water. At about seven o'clock the ship was picking up the survivors so that the submarine's crew were only in the water about three-quarters of an hour. We flew round them all the time and watched them. I learnt afterwards that forty-one survivors had been picked up. I then returned to my base about 400 miles away.

*September*, 1940

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*September*, 1940

# BOMBING THE INVASION PORTS

### BY A PILOT OFFICER OF A HEAVY BOMBER SQUADRON

*A pilot officer in a heavy bomber squadron of the R.A.F. describes an attack on Ostend, one of the enemy's so-called "Invasion Ports" on all of which our bombers have recently been delivering heavy blows night after night.*

In point of fact, these raids on the Channel ports occupied by the enemy are quite the simplest job of work we have had to do since bombing operations started; a quiet trip there and back. A couple of nights ago, for instance, when we bombed the dock area at Ostend it took us only one hour and fifty-five minutes from the time we set off until we got back to base; that was a record trip for myself and the crew.

Thirty miles out to sea from Ostend we saw a red glow in the sky. The front-gunner spotted it first and drew my attention to it. We were flying then just over the top of a thin layer of cloud. When we came out beyond this cloud we saw the coast-line for the first time, and from then onwards we could see the fires burning in the dock area at Ostend good and hearty.

Over the land the weather was perfect. The moonlight was so bright that, even from six miles away, I could make out buildings standing out against these fires in the darkness and I could see long stretches of sand on the foreshore.

We made a run straight over the middle of the dock. My observer was doing the bombing and I was flying the aircraft. He checked up and made quite sure that we were on the right target. As a matter of fact, there was no mistaking it. First of all, there was this long straight coast-line; then we identified an enormous kidney-shaped dock—it looked like a huge kidney from the air—which they call the Nouveau Bassin de Chasse. Having decided that we were O.K., we made our first bombing run. There's a large railway siding near the main wet dock and we were after that. We could see the siding and the docks plainly; in fact it was just like bombing on the practice raids.

As we started bombing, I remember noticing the time by the clock on my instrument panel. It was twelve minutes past one. The bomb aimer hit the railway siding with his first stick and the bombs started more fires, with all sorts of coloured explosions—red and yellow and blue, but mostly red—breaking out all over the place. I should say we must have got an ammunition train.

We did a left-hand circuit and were having a look to see what was going on before making our second run, when there was the most colossal explosion. It gave the effect of a gigantic mushroom, that's to say, it was thin at the bottom, but as they rose higher and higher, the flames and smoke spread out in a great circle. This column of fire must have come up to about 800 feet. We were flying at 5,000 feet at the time, and the force of the explosion threw the aircraft up fifty feet. After we bombed, we got a certain amount of fire from flak ships.

By this time fires seemed to be spreading all over the place. The moon, as I said, was shining brightly; in fact it was almost like daylight. One couldn't see anything of some part of the docks, though, because they were enveloped in a mass of fire. I think my bomb aimer and the rear gunner were feeling rather happy about it all. You see, both of them live in South London and had had their homes destroyed.

We went in again, to make our second run up this time. Again we were aiming for the rail sidings and our second stick of bombs fell towards the northern end, causing further explosions and fires. It was then eighteen minutes past one—one minute after we dropped our first bomb. We hung about, circling, for another five minutes.

The fires were still burning furiously and all the while coloured explosions were breaking out. One thing that struck me particularly was that the town itself, except for a few houses on the edge of the railway side appeared to be untouched. There were no fires there, nor was there any indication of it having been bombed, the fires were all in the dock area. We saw a lot of recognition signals being let off in the air—presumably from German fighters—but we never saw anything of the fighters themselves. Having flown round twice, we made out to sea, heading for home, and, coming back, the rear gunner said he could see the fire reflected in the sky forty to fifty miles away. As I said before, the whole trip there and back—including identifying and attacking the target and having a good look round after we'd bombed took only one hour fifty-five minutes.

Everyone who went out from our squadron found his objective and dropped his bombs; no one brought any back.

*September*, 1940

# AIR BATTLE OVER LONDON

### BY A SQUADRON LEADER

*The story of a squadron leader who led his squadron of Hurricanes in one of the great air battles over London during which the record number of* 185 *German aircraft were shot down. Londoners were heartened to see the Dorniers and Messerschmitts come tumbling out of the sky, and must have wondered what it was like "upstairs". This squadron leader will tell them. Before the war he was an estate agent in Northumberland, having joined an auxiliary squadron in* 1934. *They were in France from November until the middle of May, and during that time his old squadron shot down no fewer than seventy-eight enemy aircraft. He was recently posted to command his present squadron. He has won the D.F.C.*

At lunchtime on Sunday, my squadron was somewhere south of the Thames estuary behind several other squadrons of Hurricanes and Spitfires. The German bombers were three or four miles away when we first spotted them. We were at 17,000 feet and they were at about 19,000 feet. Their fighter escort was scattered around. The bombers were coming in towards London from the south-east, and at first we could not tell how many there were. We opened our throttles and started to climb up towards them, aiming for a point well ahead, where we expected to contact them at their own height.

As we converged on them I saw there were about twenty of them, and it looked as though it were going to be a nice party, for the other squadrons of Hurricanes and Spitfires also turned to join in. By the time we reached a position near the bombers we were over London—central London, I should say. We had gained a little height on them, too, so when I gave the order to attack we were able to dive on them from their right.

Each of us selected his own target. Our first attack broke them up pretty nicely. The Dornier I attacked with a burst lasting several seconds began to turn to the left away from his friends. I gave him five seconds and he went away with white smoke streaming behind him.

As I broke away and started to make a steep climbing turn I looked over the side. I recognised the river immediately below me through a hole in the clouds. I saw the bends in the river, and the bridges and idly wondered where I was. I didn't recognise it immediately, and then I saw Kennington Oval. I saw the covered stands round the Oval, and I thought to myself: "That is where they play cricket." It's queer how, in the middle of a battle, one can see something on the ground and think of something entirely different from the immediate job in hand. I remember I had a flashing thought—a sort of mental picture—of a big man with a beard, but at that moment I did not think of the name of W. G. Grace. It was just a swift, passing thought as I climbed back to the fight.

I found myself very soon below another Dornier which had white smoke coming from it. It was being attacked by two Hurricanes and a Spitfire, and it was still travelling north and turning slightly to the right. As I could not see anything else to attack at that moment, I went to join in. I climbed up above him and did a diving attack on him. Coming in to attack I noticed what appeared to be a red light shining in the rear gunner's cockpit, but when I got closer I realised I was looking right through the gunner's cockpit into the pilot and observer's cockpit beyond. The red light was fire.

I gave it a quick burst and as I passed him on the right I looked in through the big glass nose of the Dornier. It was like a furnace inside. He began to go down, and we watched. In a few seconds the tail came off, and the bomber did a forward somersault and then went into a spin. After he had done two turns in his spin his wings broke off outboard of the engines, so that all that was left as the blazing aircraft fell was half a fuselage and the wing roots with the engines on the end of them. This dived straight down, just past the edge of a cloud, and then the cloud got in the way and I could see no more of him.

The battle was over by then. I couldn't see anything else to shoot at, so I flew home. Our squadron's score was five certainties—including one by a sergeant pilot, who landed by parachute in a Chelsea garden.

An hour later we were in the air again, meeting more bombers and fighters coming in. We got three more—our squadron, I mean. I started to chase one Dornier which was flying through the tops of the clouds. Did you ever see that film "Hell's Angels"? You remember how the Zeppelin came so slowly out of the cloud. Well, this Dornier reminded me of that.

I attacked him four times altogether. When he first appeared through the cloud—you know how clouds go up and down like foam on water—I fired at him from the left, swung over to the right, turned in towards another hollow in the cloud, where I expected him to reappear, and fired at him again. After my fourth attack he dived down headlong into a clump of trees in front of a house, and I saw one or two cars parked in the gravel drive in front. I wondered whether there was anyone in the doorway watching the bomber crash.

Then I climbed up again to look for some more trouble and found it in the shape of a Heinkel 111 which was being attacked by three Hurricanes and a couple of Spitfires. I had a few cracks at the thing before it made a perfect landing on an R.A.F. aerodrome. The Heinkel's undercarriage collapsed and the pilot pulled up, after skidding fifty yards in a cloud of dust. I saw a tall man get out of the right-hand side of the aircraft, and when I turned back he was helping a small man across the aerodrome towards a hangar.

# R.A.F. INTELLIGENCE

### BY A FLIGHT LIEUTENANT, R.A.F.V.R.

*"Last night our bombers carried out a successful attack on an important target in Germany." This is a familiar item of news; but behind this bare announcement lies not only the pilots' accounts of their attacks on the enemy, but also a remarkable story of the immense amount of work carried out by the other branches of the Royal Air Force which help to make these raids so successful.*

*The following account by a Station Intelligence Officer tells something of what goes on behind the scenes in the operations room of a bomber station on such occasions.*

OPERATIONS room—known in the Service as "Ops"—guards many secrets. There are maps showing targets to be attacked and photographs of enemy harbours, shipping, factories and fuel and power plants. There is a mass of information collected by the intelligence department from many sources for the guidance of pilots. Information about enemy anti-aircraft defences, landmarks and landfalls and the position of the vital spots in the various targets.

Take it that the time is noon, or according to the language of the service 12.00 hours. The commanding officer, wing commander and intelligence officers are waiting for the night's targets to come through from higher authority. The commanding officer in this instance is a group captain of long service in India, Iraq, and the Far East. His quiet, unhurried manner contrasts with the keen eagerness of the wing commander, who, at twenty-eight, is probably the youngest of that rank in the R.A.F. He himself has made many raids over enemy country and combines leadership with quick understanding.

Orders arrive. It may be that some aircraft are to attack Berlin, and some to visit the base of the German fleet.

Instantly the word comes through, "Ops" room comes to life. The armourer is told the quantity and types of bombs which will be needed for the operation and soon has got ready his little trains of rubber-tyred trucks carrying the loads across the aerodrome to the aircraft detailed for the job. The meteorological officer, always known as "met", is warned to prepare weather forecasts for the districts to be visited. The medical officer is told "Ops to-night", and he arranges to stand by. The signals officer is also warned. While this is going on detailed maps of the targets have been taken from the files. Routes and distances are discussed.

Aircraft on operations are like trains. They work to schedule. Given a certain distance to fly, aircraft must be off the target at a definite time, to be home before daylight. This necessarily determines the hour of departure.

The intelligence officer turns up his files. Every scrap of information is considered, and a mass of detail is available. It may concern a huge oil refinery producing fuel for the enemy. Its size, output, motive power, its exact position in relation to towns, rivers and roads, the vulnerable points are identified and clearly marked on the maps. Having considered all the details, the station intelligence officer telephones to the group intelligence officer.

"Have you any new gen on the target?" ("Gen" is R.A.F. slang for information.)

Sometimes, fresh details are at hand, gathered from reconnaissance flights only a few hours old.

Then the intelligence officer considers what landmarks will help. "There's a river bent to the east, and a dog-shaped wood. If they come in from the south-east over the bend, fly straight across the dog head, they can run up easily over the target."

And the commanding officer asks: "What are the ground defences?"

"Pretty hot, sir. No balloon barrage, but anti-aircraft barrage, both light and heavy."

"Searchlights?"

"Quite a lot of them."

The wing commander breaks in: "I was there a month ago, and I'm sure the thing to do is to come in and attack on the glide."

The armourer telephones: "Incendiaries on all aircraft?" and the answer goes back: "Yes, all of them."

Incendiaries finish the work begun by the heavies. A well-cracked oil tank makes a good fire. Out on the aerodrome, the aircraft are undergoing their last-minute examination. The tons of bombs are housed in the aircraft, securely locked until the moment comes for their release. The hard-working ground staff has seen to everything, but the members of the crew still hang round to see that nothing has been left to chance.

The crew may consist of five men: captain, second pilot, observer-navigator-bomb aimer, wireless operator and rear gunner. All know each other so well that speech is hardly necessary.

Back again in the "Ops" room comes the briefing, and with this the atmosphere takes on a cheerful tension. The time is, say, six o'clock and one by one the crews turn up, salute smartly as they come in, and break into eager questions. They crowd round the big, map-covered table facing the same group that was there in the morning. "Crews all here?" asks the squadron commander and silence follows the affirmative.

The squadron commander reads the operation order.

"Information: the refinery is one of the largest in Germany and is working night and day."

"Intention: to attack and destroy the storage tanks, refining plant and power house." Then follow particulars of time, route, bomb-load and special instructions, after which the wing-commander makes a few observations. "Some of you were with me last time. We made a fair job of it, but they may have been able to patch it up. This time, crack it wide open. Weather: clear visibility but not much moon. Pick up the river; then your flares will show the rest."

The senior intelligence officer takes up the story. "Here are your target maps. Compare them with the quarter-inch map. Your route takes you over the 'duck'. The duck is a neck of land easily recognised as a landfall. Then on to here. There's a barrage here, so look out." He goes over the whole route, pointing out what to avoid and what to make for. Finally the group-captain adds general advice and some special item of information received from Bomber Command. "Take off at eight o'clock. Good hunting." The crews file out. The navigators have still to work out their courses. After that there is just time for an early meal before the take-off.

The "Ops" room is strangely quiet, waiting for the control-officer to telephone "times off". These are passed on to group headquarters, who in turn inform command. On the wall is a huge blackboard marked with the signs of the aircraft.

The telephone rings sharply. "N. for nuts off 19.58 D for Donald 19.59." So they go, and there is silence. Some four hours later signals begin to arrive in code announcing "task completed". Only if he is in extreme need will a pilot break the silence once he has set out on the outward journey.

Time passes slowly. About midnight, the station commander walks down the tarmac to the control-room. One by one the code-letters identifying each aircraft come through. There is an expectant pause. "What's happened to D for Donald?" asks the signal officer. "He'll be all right," replies the wing-commander. "He takes a long time to make up his mind. Hates to leave the target." But there is a hint of anxiety in his voice. On the blackboard in the "Ops" room, times off target are being checked up. The space opposite "D" looks uncomfortably conspicuous. It is still empty when the senior officers return from the control room around two o'clock. Flasks of strong tea appear and everyone waits for the next signal, when the aircraft are nearing home.

The signals officer rushes in: " 'H' has just signalled."

"He'll be here in a few minutes," says the wing commander. "Any news of 'D'?"

"I'm trying group," replies the signals officer. "He may be homing on another station. He's got a fine operator; most likely his wireless has been struck by lightning."

Meanwhile, the intelligence officers have prepared their maps and writing-pads, ready to question the crews. It seems a little hard to interrogate men who have done a long arduous job and come home tired, but it must be done while memory is fresh.

The first crew arrives, blinking in the strong light. The time—between half-past four and half-past five. "Good trip?"

"Pretty good, sir," which proves to be an understatement of complete success under heavy anti-aircraft fire. They glance at the blackboard. "No news of 'D' sir?"

"We think his wireless has packed up."

Nothing more is said, and the intelligence officer starts on the others. "Did you identify your target?"

"Yes, just as you said." So it continues. "What time were you there? Height? One stick of bombs or two? What results? Good. That must have been the power house. . . . Bright blue flashes. Second stick huge explosion, curling thick black smoke. Fire? Good."

After the results of the raid, other questions, the answers to which build up the story of enemy activity, anti-aircraft, shipping, aerodromes.

And then: "Off you go, boys. Good work." All crews pass through the same inquisition.

It is six o'clock when the signals officer rushes in, his face beaming. " 'D' is just landing." "Quite time too," says the wing commander with assumed peevishness. 'D's' wireless had been struck by lightning but he had done a magnificent job, just the same. So the crews go on to the mess, to eat vast quantities of eggs and bacon. Only the intelligence staff is left in the "Ops" room. Sorting out the tales of the night's work, comparing them all, to arrive at a complete picture, with accurate information for the Group Command and those who sit in ultimate authority.

Next morning you may read that our aircraft successfully bombed an oil refinery.

*September*, 1940

# MINELAYING BY AIR

### BY A CANADIAN PILOT OFFICER

"*To the many tasks it is already called upon to perform the Royal Air Force since the war has added a new duty—that of laying mines from the air. Many thousands of tons of enemy shipping have already been destroyed by these mines and here is a Canadian officer of the R.A.F., a young 'veteran" with thirty-six operational flights—as well as the D.F.C.—to his credit, to tell you something of the work of the aerial minelayer.*"

I THINK I had better start by explaining why anyone wants to lay mines by air when submarines and surface minelayers have been doing the job quite effectively for so long. It's not that we've gone into competition with the Navy on the job, it's just that aircraft loaded with mines, can make their way into narrow roadsteads, shallow channels and even into harbours where no surface vessel could possibly penetrate in the face of enemy defences. Within the past five months aircraft of the Bomber Command alone have laid far more than thirty separate minefields. They extend from Norway to the Atlantic ports, and as fast as a way is swept through any of these fields it is built up again where it will do most good—usually in a busy shipping lane or harbour—and in most cases the only way in which those waters could have been reached at all was by air.

Another advantage of minelaying by air is the speed with which a minefield can be sown. On one occasion there was urgent need for a certain enemy channel six hundred miles away from our base to be mined without delay. We received the order at 6 o'clock one evening. By midnight that minefield had been laid.

Accuracy is all important in minelaying. Unless the mine is placed exactly in a shipping channel it will be practically useless. International law, too, quite apart from the risk to our own ships, requires that mines shall be laid only within the limits of clearly defined areas. Actually we're each given a pinpoint on the chart and that pinpoint is where we've got to plant our mines—or bring them back. It calls for dead accurate navigation and the job's got to be done at night under cover of darkness so that the mines can't be too easily located and swept up.

The aircraft we use are Handley-Page Hampden bombers, but instead of the usual bomb load each aircraft carries a single mine. It's a pretty big mine, a long, fat cylinder about ten feet long and weighing close on three-quarters of a ton, and it packs as big a punch in the way of high explosive as a twenty-one-inch naval torpedo. It can do a lot of damage to even the biggest ship—the wrecks of several ten thousand ton supply ships which can still be seen in the Baltic are evidence of that.

The mine is stowed away inside the bomb compartment and enclosed by folding doors in the underside of the fuselage. There's a parachute attached to the mine and as the bomb doors are opened and the mine falls clear, this parachute automatically opens. It checks the rate of fall so that the mechanism of the mine won't be damaged by too violent a contact with the water. The mine doesn't make much of a splash as it goes in and it drags its parachute down after it to the sea bottom, where it stays put until a ship passes overhead and sets it in action.

Compared with a bombing raid a minelaying trip, of course, is a bit tame from the crew's point of view—almost a rest cure in fact. Being over the water most of the time you don't often get such a pasting from the ground defences as you do on a bombing raid. On the other hand, in a bombing show you do see some results for your money, whereas on a minelaying job it's a delayed-action result and you can only hope that the mine you've brought out and planted with such care will bag the biggest ship left in the German Navy. Still, the job has its compensations. For one thing, we realise how important the work really is. For another, we're given a couple of consolation prizes each trip in the form of two high explosive bombs. After we've planted our mines we can use these on any enemy ships that attack us. We don't often bring these bombs back.

When we first started minelaying our only means of retaliation were our machine-guns, and I remember one occasion in the Great Belt when we sighted an enemy destroyer a few moments after we had dropped our mine. We'd have given a lot for a couple of bombs just then but as we hadn't got them we dived down almost to mast height and shot up the destroyer with every gun we had. Then the destroyer did a bit of shooting up on its own account and I reckon we were lucky to have got away with only one hole in the wings.

Mostly though, minelaying is a much more unobtrusive and restrained affair and the less notice we attract in the process the better we like it. We're allowed to use parachute flares, if we want to, to pick up landmarks, but so far I haven't needed them. I've a grand crew and in the dozen or so minelaying shows we've done together we've usually been able to pinpoint our position fairly near to the minefield. From then onwards it's just a matter of working our way to the particular channel or harbour we want and, having discovered it, to find the exact pinpoint in that channel where our mine is to be laid. At other times, particularly if visibility is bad or the clouds very low, we may be quite a while searching for our pinpoint. Once when the clouds were down to five hundred feet we spent an hour over the Kiel estuary, mostly doing steep turns up and down the stretch of water until at last we spotted the particular square yard of estuary we were looking for.

We've been to Kiel several times. The first time I went minelaying at Kiel I found it sooner than I had intended. I was feeling my way along the coast after coming out of cloud when I spotted a fjord which I knew was somewhere near the part of the coast we wanted. I turned and flew up it to get my bearings and before I really knew where I was I found myself right over the city of Kiel itself, only 800 feet up and with every gun in the place blazing off at us. I really thought we'd bought it that time—the barrage was simply terrific. I turned right about, put the nose of the machine down and we fairly shot back down that fjord.

Then, when things had quietened down a bit, we came back, found our pinpoint in the estuary and laid our mine in the right place.

When we first began minelaying by air secrecy, of course, was of vital importance. Even a mention of the word "minelaying" was forbidden, and, instead it was always referred to in official orders by a code word. The whole secret was well kept and some thousands of tons of shipping were lost before the enemy realised that the mines which sank them had arrived by air. That caution is still second nature with most of us.

# GOOSE FOR DINNER: JUNKERS FOR SUPPER

### BY A CORPORAL OF THE BALLOON BARRAGE

WING COMMANDER: I think it was Dr. Johnson who once said he hadn't much use for balloons. Anyhow, if he didn't actually say as much, he probably thought it. Had he lived to-day he'd certainly have had something to say about the balloons of Britain's Barrage for they've now become a part of the landscape. In fact they've become so much a part of the landscape that we down below are apt to take them very much for granted and not think of them as what they really are—one of Britain's bulwarks of the air.

Only a few days ago, Marshal of the Royal Air Force, Sir Cyril Newall, Chief of the Air Staff, sent a message to the Air Officer Commanding Balloon Command, congratulating the balloon staff on their gallantry and devotion to duty in the Battle of Britain.

"Until recently," he said, "your Command have had few opportunities for service of a spectacular nature. On the other hand," he added, "their success cannot be measured by the number of enemy aircraft which they may bring down, but rather by the general efficiency with which they play their part in the air defence of Great Britain.

"By keeping the enemy bombers and fighters at a height where they can be effectively engaged by our own fighters or by anti-aircraft fire," he went on to say, "they have been invaluable members of a team upon the success of whose operations the safety of the entire country depends."

But keeping the German aircraft at a respectful distance and so hampering the accuracy of their bombing isn't Balloon Barrage's only job. They have their excitements as well. From time to time they actually bring down enemy raiders. Here, for instance is a member of a balloon crew which enjoyed that privilege only a few nights ago.

Corporal: The boys in our crew won't forget that night for a long time. It was the night we had wild goose for dinner.

I don't know how many of you know what life on a balloon barrage site is like. But believe me it's not always like being in the middle of Piccadilly Circus, not by a long way. Of course, it's very largely what you make it, and I for my part have never had a happier time in my life. But in some parts of the country, in the open, for instance—well, as I said before, it's not always like being in the middle of Piccadilly Circus. That's why a little extra appreciation from the people round about goes a long way.

It's funny that we should all remember that night by the goose we had for dinner, for we're all right for grub in Balloon Command.

But in spite of the good food, we've all got a long memory for anything like a real delicacy, like turkey or roast duck—or goose for instance. That's how I remember that particular day so well, because it was the day that Paddy, our Irishman—he's a bootmaker by trade—it was the day that Paddy shot down a wild goose. We cooked it ourselves too, on a stove lent to us by one of the local residents. It was a great day. As one of the crew had it: "Goose for dinner and Junkers for supper."

It was nasty sort of weather for balloons all that day. There was a gale of wind blowing, sometimes up to as much as forty-five miles an hour. This made the cable slant at an angle awkward for handling—and even more awkward for avoiding it if you were an enemy aircraft. There were clouds, too—clouds at different heights. You could never tell what heights those clouds would be next minute, for they were always changing and piling up on top of one another. That was why we kept the balloon moving up and down all day and during the night until we caught our Junkers.

There were strict orders to the guard on duty that night to follow the clouds up and down and pay close attention to the strain on the cable. We were all on our toes. We'd been on our toes for thirteen months.

We'd had two alerts that evening. The second came soon after ten o'clock. The clouds had come down even lower at this time and the wind was rising even higher. The crew were hauling in the balloon very slowly when suddenly we heard the sound of an aircraft. He was flying low and fast and sounded close at hand. Almost at once we heard one-two-three-four-five-six-seven-eight heavy bangs. Bombs!

It couldn't have been more than a few seconds after this that we heard a terrific ear-splitting roar in the clouds just above. It was the enemy aircraft, in a power-dive, nosing down straight on top of us. One of the guard—a schoolmaster by profession—was working the winch at the time. He jammed on the brakes and ducked down in the cage. He was taking no chances. What he was frightened of was that the plane would crash on top of him or maybe they'd go for him with their machine-guns.

One of the other guards was Paddy, the Irish bootmaker. He just dropped on one knee—exactly like the way he'd taken the pot shot that had brought down the duck—and took aim with his rifle. What he was aiming at I don't think even Paddy knew—but that's neither here nor there. The point is, he was ready for action.

It was at this moment that we caught sight of the Junkers for the first time. Apparently he'd caught sight of the balloon and immediately flattened out his dive. With a "zoom" he started a climbing turn to the right. He was trying to skim past the cable. He didn't know, of course, that the cable was slanted at an angle and so he couldn't judge its path correctly. That's where he came unstuck.

All this was a matter of seconds, of course. Then with a desperate pull he swerved and the plane hit the cable with such a terrific force that it was pulled completely round. Showers of bright red and yellow sparks flashed from the cable and the machine. You'd have thought it was daylight. And then the jolly old balloon broke away.

WING COMMANDER: What happened then?

CORPORAL: The fun was only beginning then. As soon as they heard the noise the guard dashed up to the hut. Naturally, they were all excited and kept shouting: "The balloon's gone, but we've caught a Jerry." They'd spotted it as a Junkers 88 from its silhouette. They all dashed out from the hut—just in time to see the Junkers in an awful blaze, it seemed about two or three miles away. What a sight for sore eyes that was!

WING COMMANDER: I should imagine the whole countryside was pretty well awake by this time?

CORPORAL: Everybody was bundling out of their houses, cheering and shouting. Up came the air-raid wardens to our post, asking how it had all happened. When we told them, they were as proud about it as we were.

I had then the job of reporting the whole affair to our flight headquarters, so I got into my great-coat, borrowed a motor-bike from one of the dispatch-riders and set off with the good news. I felt like the man in the poem—the one that brought the good news from Ghent to somewhere. I never could make out from that poem what the good news was, but I certainly felt like the man. From flight headquarters, a message was sent to squadron, and so I set off for the site again.

WING COMMANDER: You'd still some odds and ends to tidy up, I suppose?

CORPORAL: As far as I was concerned, the most important thing was, of course, the balloon and the cable. After a long search we found the cable. It was stretched over three fields, half a dozen back gardens, a couple of houses, a length of telegraph wires and a roadway. We arrived back just in time to meet the squadron leader who had come over from headquarters to inspect the wreck which was about five miles away.

Then we set about clearing the cable from the roadway and the houses. I think that was the worst job of the lot. It took us till daylight to get that done, hauling every inch of it as carefully as if it were string from a child's kite. We had other troubles as well, for one householder came out and demanded to know how much longer we were going to be as he couldn't get to sleep again, he said, once he'd been awakened. The poor old gentleman didn't realise how near he'd been to never waking up again!

WING COMMANDER: What happened to the Junkers. . . . I mean where did it come down?

CORPORAL: By an extraordinary piece of good luck for the people round about, it flew over completely open country till it blew up and scattered itself over the fields.

WING COMMANDER: What happened to the crew?

CORPORAL: Two of them baled out and fractured their legs on landing. The other two were killed.

The next morning we examined the balloon cable. One of the strands was flattened out as if it had been hit with a heavy sledge-hammer—that was where the Junkers had hit it. It took us all the morning to get the cable back on to the winch after the armourer had taken the broken piece away for investigation.

We have only one regret, actually, and that is that we caught the Junkers *after* he'd dropped his bombs, and not before. We've now a new balloon and are keenly waiting for the next Junkers to come along.

WING COMMANDER: Well! I hope the next time, you have goose for dinner as well.

*October*, 1940

# MAINTENANCE WORK

BY A FLIGHT SERGEANT
OF COASTAL COMMAND

I AM a flight sergeant in charge of a maintenance party at a Coastal Command station of the Royal Air Force. Our squadron uses American-built Lockheed Hudsons, which go out over the North Sea every day on reconnaissance duty.

I was piloting myself until an accident put me on ground duties. Now my job is to keep the Hudsons in the air.

The aircraft repair section of any station is a pretty busy place. All day, and all night as well, you hear the buzz of electric drills, the rattle of compressed air riveters, the hum of paint-sprayers and the roar of engines. It's not a peaceful life, but it's a very interesting one. There's plenty of work for us all, from the youngest reservist to the station engineer officer.

Talking of youngsters, I have a very useful lad who is a modern counterpart of the chimney-sweep boys of the past. He's only four feet six inches, and of course is called Tich, and is the only person on the station small enough to crawl right to the tail end of the fuselage of a Hudson. He was away one day, and another rigger took his place. This man got to the end but became wedged, and we couldn't move him. It took two hours' work to get him out. He had gone in feet first, and got stuck on his back between a couple of cross-bracing struts and the roof. We had to turn him over on to his stomach and pull on his shoulders to get him out. After that, Tich reigned supreme in his own sphere.

Ours was the first squadron in the R.A.F. to be equipped with American aircraft, and anyone who wanted to know the difference between the English and American language should have come to our workshops then. Many of the engineering terms are quite different. Most people know that petrol is gasoline, and engines are motors, but did you know that the American equivalent of chassis is "structure", oil or petrol feed-pipes are collectively called "plumbing", a handfuel pump is a "wobble pump", and a tailplane is a "horizontal stabiliser"? There are many more curious terms we had to learn when we first got Hudsons. We could have done with a dictionary. We had the very willing assistance of Lockheed and Wright-Cyclone engine experts to smooth the difficulties, but even they unwittingly misled us on occasions. For instance, they would talk about seeing a ship out at sea, and while we would look on the water they were watching an aircraft in the sky.

In a way, we are rather like surgeons who take a pride in performing restorative treatment. We replace broken sections, and graft on new metal skin. If you could see the damaged condition in which an aircraft sometimes returns, you would think it could never be repaired. But we can do wonders with a few days in the workshops—or even a few hours—and it comes out again as good as new.

When an aeroplane returns with battle-scars we make a thorough examination to check up the full extent of the damage. It's amazing how some bullet-holes hide themselves away. On one occasion we thought we had finished the repairs, but a final check-over revealed a bullet-hole through a bolt holding a wing in place. The bullet had neatly removed the core of the bolt without damaging anything else, so it was difficult to see that anything was wrong. Then, sometimes, a scrap of shrapnel will play havoc with the complicated wiring system of the instrument panel. When something goes wrong with that box of tricks, you need the patience of Job to put it right again.

One of our most interesting jobs was repairing a Hudson which became known as the "corkscrew plane". It was badly damaged near Norway, and limped home with rudder controls away. The crew almost baled out, but decided to try and put it down, and made a sort of side-slip landing in the dark. They were all safe, but the aircraft *was* a mess! We got to work that night. The tail control wires were all wrapped round each other like a ball of wool after the cat's got it. We had to rebuild the entire port tailplane, but that aircraft was flying again within five days, and is still doing its patrols to-day.

We did a quick-change act on another Hudson which came back 300 miles over the sea with one engine seized up. The pilot radioed that one engine had packed up, and the moment he landed we had a new engine and all accessories ready. The aircraft arrived back in the evening, and we had it flying again the next day.

It's a great help to us that the engine unit of a Hudson is amazingly compact. Each of the two 1,100 h.p. engines is held to the wing by only a very few main bolts. We can take out one engine and bolt another in position in a quarter of an hour, and it only takes another couple of hours to connect all the pipe-lines, controls and exhaust system ready for starting up.

Every man on the maintenance side knows the responsibility of his work. The crews of our aircraft give us their complete confidence. Their successes against the enemy are ample reward for our work. They place their lives in our hands, and we do our best to be worthy of the trust.

# A TAIL GUNNER'S STORY

### BY A FLIGHT LIEUTENANT, R.A.F.V.R.

*The speaker is a commissioned air gunner in the R.A.F.V.R.—a flight lieutenant, aged 39, and a well-known big-game shot—who has been flying as a tail gunner with a Heavy Bomber Squadron operating by night over Germany.*

I AM going to tell you something about the life of a tail gunner in one of our heavy night bombers. But if you expect a long catalogue of thrilling incidents, you will be disappointed. We certainly have our excitements—we get shot up, iced, and sometimes fed up—but for the most part our outings lack the Hollywood element. In the last resort, it is in the gunner's hands that the safety of the crew rests, but the high lights of serial combat—Kipling's Unforgiving Minute at close quarters—come only now and then. At the end of seven and a half hours in the tail turret, one rather sighs for them.

A tail gunner is part of a crew, and this crew's life dominates not only his flying hours but his whole existence. Crews are married up at an operational training unit, or on arrival at their squadrons, and after that they are never parted. Crew life becomes unendingly intimate. On the trip, you don't see them at work, but you know they're there, and you take comfort from each other. Without being sentimental, there is a sense of comradeship about the venture. You come together, six nondescript individuals—young and old, lean and fat, officer and non-commissioned officer. You eye each other in a rather British sort of way and wish you could find something graceful and appropriate to say. You can't. You think how odd they look and I suppose you must look just as odd to them. None of you would probably have chosen each other if crews were made on the picking up principle, but after a bit you would not dream of changing. It is really very curious.

In our crew the captain and second pilot were Scots; the two wireless operator air gunners were from Canada and the Irish Free State, while the navigator came from the West Indies; and I'm an Englishman. One of the gunners is young enough, with due precocity on my part, to be my son.

The two other things that are all-important to a gunner are his turret and his guns. He is entirely responsible for their upkeep and efficiency, and he nurses them as a woman does her child. Daily he cleans them, fills the ammunition boxes, looks to the sighting. As to his turret, it is his home for all his flying hours. He's practically always working in the dark. At first, one is all at sixes and sevens. One puts down the loading handle or the spanner or the dummy round, and cannot find it again. One bangs one's head and tears one's hands. I have shed good blood, not to mention flesh, in my turret. But after a bit it becomes almost lovingly familiar. One knows the exact peculiarities, the strains and stresses of each fitting, and each seems to have a personality which one regards with affection even in its most stubborn moments.

I'll take you with us to-night on an ordinary sortie over Germany. The first time it's rather a thrill and one feels that there should be more ceremony about it; but after a bit it becomes an unnoticed routine. After all, one could hardly line up like a musical comedy chorus and sing: "There'll always be an England". So settle down in the seat, adjust your flying-helmet, play into the inter-communicating set—and there you are. Your parachute is hung up just behind you and you've locked the turret doors. As is probably well known, our turrets are power-operated, swinging easily in any direction, and so you test your turret, moving it to and fro by pressing on a pair of handles, rather like bicycle handles. And you finally load and cock the guns, putting on the safety catches, because one may meet brother Boche at any moment. All this makes you feel rather hot, because knowing you may fly high, you've got on a couple of pull-overs, a leather Irvine suit which is fur-lined, leather gauntlets with silk linings and heavy flying-boots. You apply your body gingerly to the seat. Seven hours is a good long sit. I can assure my listeners that the last few months have made me a connoisseur of contours.

Then you switch over your "inter-com" and speak to the captain to show it's working all right; and you hear the others doing the same, for you are all on the same circuit. In this way you get a very fair idea of what is going on all round the aircraft. You can picture each member of the crew doing his job from the report he gives or the instructions he receives. Personally, I never talk down the "inter-com", unless I have anything that needs saying. My first squadron-commander told me that a garrulous tail gunner was an infernal nuisance—and I marked his words.

The striking thing about a tail turret is the sense of detachment it gives you. You're out beyond the tail of the plane and you can see nothing at all of the aircraft unless you turn sideways. It has all the effects of being suspended in space. It sounds, perhaps, a little terrifying, but actually it is fascinating. The effect it has on me is to make me feel that I am in a different machine from the others. I hear their voices; I know that they are there at the other end of the aircraft, but I feel remote and alone. Running my own little show, I like to sense that they are able to run theirs feeling that they needn't worry about attack from the rear. Some gunners have told me that this sense of isolation weighed heavily on them at first, but I have spent a lot of time occupied with solitary pursuits and it has never irked me, personally.

We must keep a good look out, you and I, in our rear turret to-night, for, in the last month or so, the enemy fighters have been more active by night; and quite a few of our gunners have been engaged. Previous to that we had, unfortunately, not had much opportunity of using our guns, except during the period of the fighting in France when we got quite a lot of good ground targets at low altitudes. I remember with peculiar satisfaction a long white road in Northern France, a full moon and a German lorry column; a particularly desirable combination, if I may say so. But from a gunnery point of view our outings have often been, as Dr. Johnson said of second marriage "the triumph of hope over experience". We hoped that the German fighters would be up and engage us. Experience taught us that it was unlikely; but now things have livened up a bit.

Now we are rising slowly over the familiar, darkened landmarks below. A pause, and we have crossed the coast and we ask the captain's permission to fire a burst into the sea, just to make assurance doubly sure as regards the serviceability of our guns. Out at sea, away on my beam, I suddenly see another aircraft; a twin-engined plane flying parallel to us. It is a long way off. Can it be a Messerschmitt 110? I report to the captain and keep it in view, but as it swings in I recognise the high familiar tail fin of the Wellington. Soon it has disappeared again in the darkness. Good hunting.

Time passes—we are over the Dutch coast and soon we are flying high above a bank of clouds. It is lit from below by German searchlights and this gives it a sort of opaque glow. Our captain comes down just above it, so that we can have cover if it is needed. Ten minutes later we are past the clouds, climbing again. We have been this way before and we are getting to know it quite well. Now the Germans are after us with their searchlights—and pretty good they are, too. Out in front there is a flak barrage, otherwise known as an anti-aircraft barrage. You and I in the tail turret can't see the barrage yet. The searchlights keep crossing and crossing. Now one's caught us. But no. After holding us for a moment it passes. Two minutes later, however, they get us good and proper. And very confusing it is, too. You feel a cross between a fly on an arc lamp and a man whose clothes have been pinched while he was bathing. But, of course, it's a good deal worse for the captain, who's flying the aircraft.

We turn and twist, hoping to get clear, and—now the party's starting!—here comes the flak. Personally the German flak has never worried me very much. Perhaps I've been lucky. You can see the pyrotechnics coming bursting up at you, and going off all round you, with a sense of detachment. It's a Brocks' benefit—and all for you. It would cost you a shilling at the Crystal Palace. I have never really honestly felt it *could* be going to hit me. I suppose I'm the usual indolent English optimist. And if it *does* catch us, we have the benefit of our marvellously constructed machine. They stand a lot of punishment. A large hole was once made only four feet behind my seat, and I never even knew the old kite had been hit.

Well, we are getting pretty close to the target now, and I can hear the navigator and the captain chattering away over the "inter-com"; but actually there is no need to worry about spotting our target to-night, because some more of our bombers have been there first and the factory we're after is blazing away nicely. It's a terrible temptation to the gunner to sit and watch the bombs dropping. But really he oughtn't to, because we may be attacked at any moment and the rear gunner's job is to watch for *their* attack, not ours. Still, let's have a peep or two out of the corner of our eye. The first stick seems a bit wide, but the second hits the target square as far as one can judge, and adds to the blaze. "Whoopee!" shouts the second pilot. "Whoopee!" shouts back the captain: and "Whoopee" shout you and I from the back.

We waste no time but turn for home. This is where we may expect attack. We have been fired at pretty continuously all the time we have been over the target area, but now the flak has stopped, and there are only the searchlights. This seems to suggest fighters. A few nights earlier, in this same area, a machine from our squadron met an enemy fighter under just these conditions. With both aircraft illuminated by German searchlights, the fighter came bursting up and started banging off tracer at about 600 yards. It went low.

Our gunner let him come to within three hundred yards and then gave him three or four bursts. He banked sharply and then broke away. However, the gunner thought that wasn't the end of him, nor was it. He came in again, slightly above, and firing off red and green tracer with all the enthusiasm associated with the fifth of November at a prep. school. This time our gunner gave him all he'd got. But he didn't need the lot. He just went into a vertical dive and pitch-forked himself into the Reich.

Well, we're all teed up for something to happen; but it doesn't. More searchlights, more flak, but no fighters, and in due course we are crossing the coast again, though that in itself spells no immunity from attack. It's beginning to feel pretty chilly because we have been flying at a good height; and I suddenly find that one of my legs is getting cramped, and that six and a half hours of scanning the heavens has been a bit of a strain on the eyes; and that my hands have grown weary of holding the grips that operate the turret. In short, quite suddenly, one finds that a lot of time has passed, much to one's surprise, and that one's feeling tired. Still, anything may happen at any moment, one keeps telling one's self—one must not relax.

Now we're over our own coast. Searchlights catch us at once. Our searchlights are *really* good.

We've had a good trip. Things have gone well. The target was found easily and was well and truly hit. There's a happy atmosphere inside the kite—though nothing is said. You notice the barometer rising. It's sort of psychological.

Well, here we are, circling the aerodrome, waiting for permission to land. In we come—a good landing—and we taxi up to the hangar. The C.O.'s on the tarmac—"Square" by nickname and square by nature—and he wants to hear about it; and then we go and pull off our flying-kit; swap a few experiences in the crew room; put in the report.

And so to bacon and eggs and bed in the pale light of a dawn I used to associate with roe stalking and cub hunting, though that seems a long time ago now.

I wish I could tell you something about this ordinary tail gunner's outing that was more spectacular than the things that have happened to you and me . . . there isn't even a hole in our aircraft to show we've been there. But the life of a tail gunner in a heavy bomber is one of long hours of humdrum. I am glad that so much of the mock-heroic nonsense talked about tail gunners in the early days of the war has dried up—suicide clubs, and that sort of idiocy. We resented it. But I should like to say a word of thanks to the designers and workpeople who give us our splendid, unfailing guns, and to the armourers who at all hours and in all weathers keep them in action. They are heroes of this war, and it is they who make our work something in which we have a full measure of confident pride.

# TWO FIGHTER PILOTS' STORIES

*The other day two fighter pilots met for the first time. They met in the sky, high above the Thames estuary. One was in a Spitfire and the other was in a Hurricane and they had become separated from their squadrons. Finding themselves together, they formed a little team. Between them they "beat up" six German raiders. They know that they destroyed three of them—two Dorniers and a Messerschmitt—and they don't think the others were likely to get home.*

*Having finished that job they flew back to the coast, waved to each other and went their different ways.*

*Ten days later they met again, this time on land. The Hurricane pilot flew across to the Spitfire pilot's aerodrome and they went over the battle together. To-night they are going to talk it over again for your benefit. They found that they were both about the same age (the Spitfire pilot is twenty-one, the Hurricane pilot twenty), that they both had the D.F.C., that they had joined the R.A.F. Volunteer Reserve at the same time—February,* 1938, *and that they had each won their commission since war broke out.*

*The Spitfire pilot was a farmer in Shropshire before the war. The Hurricane pilot was a Manchester bank clerk. Perhaps he'd like to begin the conversation.*

HURRICANE PILOT: I'd like to go through that day again. When I first saw you come alongside in your Spitfire I thought you were a Messerschmitt. Then, you remember, I pointed at the Dornier about a mile in front, and saw you go away from me, because a Spitfire certainly has the legs of a Hurricane at that height. When you'd made your first attack, I caught up with him and we took our time finishing him off. As a matter of fact, I ran out of ammunition towards the end, when he was down to fifty feet. I made several dummy attacks on him before I saw you send him into the sea.

Spitfire Pilot: And I thought you were playing the little gentleman. It just seemed that you were saying: "Look, you have this one, it's your turn."

Announcer: Now you are getting on too fast. Let's start again with the Spitfire.

Spitfire Pilot: What happened to me was this: Our Spitfire squadron was over London when the battle began and pretty soon we were all split up into a series of dog-fights. When you are tearing about the sky you don't see much, and you sometimes find yourself alone when you do get a chance to look round. That was what happened to me. I could see no sign of my squadron or of the enemy formation. There were plenty of clouds about, remember. I looked around and saw, about 2,000 feet above me and away to the north-east of London, three Dorniers and three Messerschmitts being dogged by a Hurricane.

I decided to go up and give whatever help I could, but before I could get up there the Hurricane was milling around with the Messerschmitts and two of them were walloping down through the clouds absolutely done for, in my opinion. When I got up there I shot down the odd Messerschmitt. Then I saw you blaze away at a Dornier. He did a somersault—a couple of somersaults. As he whirled over, bits of his wings fell off, and he went crashing down through the clouds.

After that I drew alongside your Hurricane and you pointed forward. I looked where you were pointing, and saw a Dornier about a mile ahead, heading off for the sea. I opened up and drew away from you, made an attack and the Dornier went down through the clouds. We both followed him through, and took it in turns to attack him. By the time he had reached the coast he was at 1,000 feet, still going down steadily. He was only at fifty feet when we passed down the middle of a convoy. We were below the tops of the masts all the way between the ships. Then, about forty miles off Clacton-on-Sea, I gave the Dornier a final burst and in he went.

He alighted on the water tail first, quite comfortably, you might say. Then a wing cracked off, his back broke, and down he sank.

Announcer: What does the Hurricane say to that?

Hurricane Pilot: I really didn't notice your Spitfire until you flew alongside when the chase of the final Dornier began. I remember cracking one Dornier down, and attacking another, and then being set on by three Messerschmitts 109. And after the milling around with the Messerschmitts I started after the Dornier. I know I hit at least two of the 109s, but I didn't see them go down. I was too busy. I remember, though, attacking a Dornier earlier on. Maybe two. It's hard to say.

Spitfire Pilot: I saw you do it. The first one was lovely. And the other went straight down through the clouds in a vertical dive.

Hurricane Pilot: The main thing is that we beat them up, isn't it? What I liked was when you shot off in front of me chasing that last Dornier. When you caught him up and started squirting at him I was about half a mile behind you. He dived through the clouds, so I dived through after him. I came out below the clouds and the Dornier came out a short distance away. I think he was a bit of a nit-wit, don't you? If he had stayed in those clouds he might have been safe.

Spitfire Pilot: You're right. But, mind you, he had a lot of my bullets inside him even then, and maybe he wanted to stay in the clouds and couldn't. It was easy after that, wasn't it? Those quarter attacks we made on him, in turn. First you from the right, swinging across his tail, then me going at him from the left. We just criss-crossed as he flew on a straight course, though losing height all the time. I should say he was about 1,000 feet when we reached the coast, and he got down to fifty feet before we finished him off.

Hurricane Pilot: Before *YOU* finished him off, you mean. I liked the way we both flew back to the coast, grinning at each other. I thought once of coming along with you to your aerodrome so that we could discuss the battle together. Then I thought I'd better get back. I only had a few gallons of petrol left when I landed.

Spitfire Pilot: So had I.

Announcer: Well, your story certainly shows that it doesn't really matter—to the Germans, I mean—whether a Spitfire or a Hurricane attacks them.

HURRICANE PILOT: There's no doubt about that at all. Nevertheless, I'm used to the Hurricane, so give me a Hurricane every time.

SPITFIRE PILOT: And give me a Spitfire. By the way, a Spitfire is a lot easier to handle than some of the trainer aircraft I learned in. I do hope that my old instructor is listening in to this, for he always said I was the world's worst pupil in any kind of aircraft.

HURRICANE PILOT: That's funny. That's what my old instructor used to tell me.

ANNOUNCER: Perhaps that's part of the instruction.

*October*, 1940

# RESCUE IN THE ATLANTIC BY A SUNDERLAND FLYING-BOAT

### BY A FLIGHT LIEUTENANT

My Sunderland was the flying-boat which found a lifeboat in the Atlantic recently and brought its twenty-one occupants back to this country. It belongs to one of the Royal Australian Air Force Squadrons and the entire crew is Australian.

The men in the lifeboat were survivors of a torpedoed ship and they had been adrift for three and a half days when we picked them up. We had sighted the same lifeboat two days before, and had dropped a container with food and cigarettes to the men. But the condition of the sea then made it impossible to alight. The second time we saw them they had rowed and sailed a little nearer to this country, but they were still about 150 miles from the nearest land.

It was still dark when one of my gunners reported a red light on the sea some miles away. We flew in that direction, and soon we could see the outline of a boat below us.

We flew round for about a quarter of an hour waiting for the daylight to improve. I thought the condition of the sea might permit a landing, and made several dummy approaches on the water. This meant coming down very low—a few feet above the surface—to see whether it was possible to get down without damaging the flying-boat.

I discussed it with my co-pilots. We decided that it could be done, and I came down on what seemed to be the flattest area of sea in the vicinity. This, however, wasn't as calm as it seemed. There was quite a lumpy swell and the aircraft lurched rather heavily once or twice before coming to rest.

We kept two of our four engines running, but they gave too much headway to the aircraft and the men in the lifeboat, about a quarter of a mile away and rowing hard, could not catch us up. We turned back towards them and stopped all our engines.

I directed them towards the bow of the Sunderland and asked them to lower their mast, which might have holed the wing. They brought the boat round and several of the men fended it off while the others piled in through the front gun turret. It wasn't an easy transfer because their boat was rising and falling in front of the nose of the Sunderland.

Although several of the men were suffering from exposure and later were taken to hospital, they clambered aboard with very little loss of time. Some of them were throwing kit from their boat into the aircraft, but I objected on the grounds of weight. The skipper had a big cardboard box under his arm. He said: "What about this? Here are my ship's papers." Of course, I couldn't refuse those.

I was anxious to get off again as soon as possible and we distributed the passengers in the aircraft so that their weight would not upset its trim. We had been on the water nearly half an hour.

It was a tricky take-off because of the confused swell and the additional weight. We struck rather a bumpy patch in the course of our run which sent several cups scuttling in the galley and we nipped the tops of two swells before we were properly airborne.

On the way back to base, the rigger, who is our cook, gave the survivors as good a breakfast as he could on the food available—which, unfortunately, was not much for so many. But it was at least hot—cooked on the galley stove.

I didn't see much of our passengers on the way back as we were confronted with foggy conditions and my co-pilots and I were fully occupied in managing the aircraft. However, we got back safely and handed our survivors over to the care of the medical officer, who was waiting for them as a result of a wireless message we had sent.

*October*, 1940

# BOMBING BERLIN

### BY A SERGEANT PILOT

*This account of a raid on Berlin is by an Irish sergeant-pilot who was recently awarded the Distinguished Flying Medal for good work done over Germany. More recently still he carried out a daring attack against an important military objective in Berlin.*

If a bomber crew are to be successful in all they undertake it is essential that they should work as one man. My crew are an excellent team and that is one of the main reasons why we were able to pull this attack off satisfactorily. When I was at school I was often told that if an Irishman, a Scotsman and an Englishman lived together in one room it would not be long before they fell out. I am glad to say that this does not apply to my team, perhaps because there are two Irishmen to keep the peace.

So much depends on the navigator that it is just as well that I should tell you straightaway that it is he who comes from the same country as myself. The rear gunner is the Scotsman and the wireless operator the Englishman. The rear gunner and myself are more or less R.A.F. "veterans". We have both been in the service about five years. The navigator joined up straight from school and the wireless operator gave up his job as a clerk to undertake what he calls "more exciting work".

This was my first official visit to the German capital. I was over it once before, but that was after I had been attacking a target at Stettin. Afterwards we all thought it would be rather fun to make the Berliners go underground, so on our way home we flew over the city and made the ground defences waste a lot of energy and ammunition for nothing. But the flight I am going to tell you about was a great deal more thrilling than the raid on Stettin.

This time on our arrival over Berlin we ran into a fierce barrage; shells were bursting all over the place, but in spite of this we spent about forty-five minutes over the capital before we dropped our bombs. We explored the city thoroughly and eventually found the target we were after.

All the time I was manipulating the stick, the navigator was busy getting a decent pinpoint, while the other two members of the crew were giving me advice on which way to go in to avoid the ack-ack. We were then fairly high up, but the shells were still bursting pretty close to us. None of them actually rocked the aircraft, but two were close enough for us to hear them burst.

There was a slight ground haze over the city but the moon penetrated it and showed up all we wanted to see. Suddenly, through the intercommunication system and above the roar of the engines, I heard the navigator say: "I am sure that's the target." Having complete confidence in him, I had no hesitation in shoving the stick forward and the nose of the aircraft down. Just before we went down I said to the crew: "All right, down we go," and just as we started I thought of my crew hanging on for dear life. We had been talking about dive attack for at least an hour before we got to Berlin. During the dive, which was made at a good speed, I had the target in the gun-sight and I held it there. All the time the target was getting bigger and bigger. Then I shouted "let them go" and the bomb-aimer pressed the button. As soon as the bombs burst all the anti-aircraft guns opened up and every ten or twelve seconds we felt the most colossal bumps and the machine was jockeyed about all over the place. At first I started to climb, then to avoid the shells I had to dive again, then climb, then go from side to side, then do stall turns, then up, then another dive. This business of going up and down went on five or six times. One thing I am certain of is that I wouldn't dare to throw the aircraft about in daylight as I did that night.

At one moment I saw a balloon go up in flames. Fire from the guns on the ground must have hit it. Actually I did not see the balloon until it caught fire; there was a flash and the whole thing was ablaze. We were only thirty yards away at the time and the cable down, whilst some of the burning fabric was sliding right in front of us. One of the chaps said that it reminded him of the Indian rope trick. In the end the cable fell clear of us, and we all thought afterwards what a good thing it was that a shell had hit it. Twenty minutes later we were right out of the barrage and setting course for home.

*October*, 1940

# STORY BY A PILOT OFFICER OF THE AMERICAN EAGLE SQUADRON

*The Eagle Squadron is a squadron composed of pilots from the United States who have come to this country to help in the Battle of Britain. The story following is by a young pilot officer who hails from California. He took part with a British squadron in the great air battle on September 15th when the German Air Force lost 185 aircraft. He has had many adventures since he left his peaceful sunny California.*

I EXPECT it must seem a long hop from guiding visitors round the movie studios in Culver City to fighting in an eight-gun Spitfire over London. But that's just how it happened to me, and all within a little more than a year, with some exciting adventures in between.

It was only my second air fight when I helped rout Goering's mass attack on September 15th. And I had the good luck to shoot down my first raider.

During the battle, the air over Surrey, Kent and Sussex, was full of bombers and fighters. At 20,000 feet I met a formation of Me.s 110. I gave one a burst and saw him giving out smoke. But I lost him in the cloud before I could press home my attack.

Then below me I saw a big Dornier 215 bomber trying to seek the safety of some clouds. I followed it down and gave it a long squirt. Its left motor stopped and its right aileron came to bits. Smoke was pouring from it as the bomber disappeared in cloud. I followed. Suddenly the clouds broke and on the ground I saw a number of crashed aircraft. It was an amazing sight. They had all crashed within a radius of about twenty miles from our fighter station. My Dornier was there too. I was quite sure I could see it. A little later I learned that the Intelligence Officer's report on the damage to the crashed Dornier agreed with my own, so I knew I had claimed my first definite German victim.

That was a great day for England. I thought this little island was going to sink under the weight of crashed enemy planes on that day. And was I proud to be in the battle! It was the fulfilment of a year's ambition.

But let me go back and tell you the story of this momentous year.

My home is in Hollywood. It was in the wonderful Californian climate that I was born, educated and learnt to fly. I don't suppose there are more than seven days in a year when you can't take the air in California. I learnt to fly at the Mine Fields, Los Angeles. I was always pretty keen on flying and whenever there were no classes at school I hurried out to the airfield to put in all the time I could learning about aircraft and their vices. My instructors were mostly army people. I went through the various graduations and by July last year I was a fully qualified charter pilot.

For nearly two months last year I flew parties up to the High Fierres in California on hunting and fishing expeditions. It was pretty tricky flying, because you get some fierce down draughts and you can't be too careful.

I had a civilian job of course in the M.G.M. studios at Culver City; I finally acted as guide for visitors to the studios. I used to meet all the film stars and found them nice ordinary folk. But my studio jobs didn't keep me from flying and in the winter of 1939 I took a course in aerodynamics at evening school.

Then a number of us met Colonel Sweeney, whose name you will know from his association with the Escadrille Lafayette in the last war. With him we decided it would be a grand idea to form a flight and go out and fly for Finland. But, I guess, that war was over before we could get going.

In May of this year we decided to form a squadron of all American flyers, another Escadrille Lafayette. The adventure was off.

Several of us went by train from Los Angeles, through the States to Canada. Finally we finished up at Halifax, Nova Scotia, where we got split up. I joined a large French motor vessel, which was part of a big convoy sailing for France. My boat could do about sixteen knots but she had to travel at only six. In front of us was a boat with 400 mules on board. The stench from the mules was something awful and so was the weather. We had pursuit planes, bombers, and munitions of all sorts on board, cargo worth in all about seven and a half million dollars. We rolled and pitched all the way across the Atlantic and were mighty thankful after seventeen days to tie up at St. Nazaire.

All our plans went hay-wire at St. Nazaire. I had no passport and had lost my birth certificate. Naturally the French treated me with suspicion.

Incidentally, there's a story about that birth certificate. In all my journeys up and down France, I stuck to an old shirt just in case I wanted a spare one any time. Only last week I took out that shirt and from it dropped my birth certificate.

The next thing was to get to Paris and meet the rest of the boys. I took three and a half days to reach the capital and there I met my friends who had disembarked at Bordeaux. Just outside Paris while in the train I had my first experience of being bombed. The scream of the bombs dropping on the suburban houses from about 20,000 feet was awful.

We made our way to the French Air Ministry, saw high officials there, and were given our physical examination. The French didn't hurry, and we were in and out of the Ministry for three days. They kept telling us that all would be well and that we would be flying any day soon. Actually we spent a whole month in Paris, doing nothing, for nothing could be done for us.

Then suddenly one day we realised that Paris was going to be evacuated. As the Air Ministry had gone, we made up our minds to get going as well—to Tours. A pall of smoke—which might have been a smoke screen—covered the city and you couldn't see more than a block away. There must have been 10,000 people at one station, all patiently waiting for trains to take them to safety—staunch solemn queues all round the station, men, women and children.

It took us a day and a half to reach Tours and it was an awful journey. Sometimes we had to ride between the cars to get a breath of fresh air. But there was no panic among the refugees, just fear and depression. We didn't lose a bit of luggage on this journey. We spent a week at Tours and were bombed by Heinkels and Dorniers every day. There was a pretty big party of us by now, most of them belonging to the French Air Force. We left Tours by bus for Chinon about an hour's ride away. We got away just in time, for the Nazis bombed and machine-gunned the main bridge out of Tours just as it was packed with refugees. The bridge was completely destroyed and very many refugees were killed.

Things weren't looking at all good. We were tired and food was getting scarce. We set out for Arcay about four hundred of us of all ranks, and from there walked another fifteen miles to Air Vault. Our boots were completely worn out, and we had no food and no water. Dog-tired, we lay down in some fields at Air Vault, but not for long. At nearly midnight we were ordered by an elderly French officer to get going once again, this time to Bordeaux. It took us three and a half days in a packed train to reach Bordeaux, and when we got there we found that the French Air Ministry could do nothing for us. We Americans were pretty sore by this time and thought that the best thing we could do would be to take some aircraft and fly to England. But that little plan didn't come off and we began our travels again determined to get out of the country.

Our little bunch went by bus to Bayonne. The British consul had left. We had no money and were starving. Eventually we made our way to St. Jean-de-Luz and were lucky enough to get the American consul. He was a fine guy and treated us pretty handsomely. But he told us the situation was pretty bad and advised us to quit. There was a crowd pouring into St. Jean-de-Luz and the quay side was crowded with refugees. They came any old way they could, in cars, on motor-cycles and cycles. The cycles they did not bother to park but simply threw them in the water.

We boarded a British ship, *Baron-Nairn*, a little old-timer of seven knots. We were a mixed crowd on board. Our number included seven hundred Polish refugees. A tragedy occurred as we were going on board. We had only one suit-case between our little bunch. The handle came off and into the water she went with all our belongings. All the extras I had then was a pair of shorts and a couple of shirts. We sailed across the Bay of Biscay. It was a three-day journey and all we had to eat was a dog-biscuit—even the one dog on board wouldn't eat them. The boat had no cargo and rolled pretty badly. But the crew were rather kind and did all they could for us.

Eventually we made Plymouth, although I thought at one time we were bound for South Africa judging by the ship's course.

I guess we weren't too popular at Plymouth. We had no papers and we were evacuated straight away to London. We were put in an ice skating rink and had to stay there for three days. We weren't allowed out at all. We rang up the Air Ministry, who sent round an officer to see us. He was very kind but didn't hold out much hope that the Air Force could use us at the moment.

We talked it over between us and made up our minds to return to America. We rang the Embassy who sent round a representative to see us. He got our particulars, checked them over with Washington, fixed us up with passages to America and lent us £15 for food and clothing. It looked as if the adventure was over.

Then, I forget how, we met a very fine English lady, who after hearing our story told us she was sure that a friend of hers, a well-known member of Parliament, could do something for us. We met him next day in the Houses of Parliament and he sent us to the Air Ministry. We were given our physical examination at once. All passed, and so we were in the Volunteer Reserve of the Royal Air Force for the duration of the war.

We felt pretty good when we went to the American Embassy. The officials there were mad with us at first for upsetting all the arrangements, but we soon smoothed that out. Things moved rapidly. Three of us, all in R.A.F. uniforms, were sent north to an Officers' Training Unit. I had not flown for two months, but after twenty minutes in an advanced trainer I was put into a Spitfire.

After twenty hours' flying in Spitfires I was attached to a station in the south, just in time for the opening of the big Blitz. But

I had several weeks' training before I became operational, that is, fit to fight. And I guess my first fight was lucky.

I was patrolling high over an English port on the South Coast when I saw some Me.110s. I went into them and hit the first guy with my first burst. He was quickly lost in cloud. Then another Me. 110 shot ahead of me. I gave him a long burst and saw my stuff entering his fuselage. He climbed steeply then, and then as steeply dived in a sort of spin. I couldn't turn on oxygen and suddenly had what they call over here a black-out. I went into a sort of dream from which I awakened when I was only 1,000 feet from the ground. I think I heard myself say "you'd better come to, you're in trouble." Anyway, I landed safely with two probables in my "bag".

And now, we Americans are a separate squadron. We wear R.A.F. uniforms with the American Eagle on the shoulder. It's a grand idea this Eagle squadron of all American flyers. We must try and make a name for ourselves, just like the famous Escadrille Lafayette. After all, we're all on the same side and all fighting in the same cause. The fellows in the squadron come from various parts of America—New York, Idaho, Minnesota, Oklahoma, Illinois and California, we're all flyers and very keen. We have got a lot to learn yet, of course, and that is why I'm so glad to have been with an English fighter squadron, first. These English pilots certainly know their fighting tactics. My old squadron has brought down at least one hundred German aircraft. The German airmen may be pretty good formation flyers, but the British pilot has got the initiative in battle. He thinks quickly and gets results. He knows how to look after himself.

And are we lucky with our fighter planes? I guess the Spitfire is the finest fighter aircraft in the world. It's rugged and has no vices. I'd certainly rather fight with one than against one.

We like England and its people who are cheerful and very easy to get on with. I miss the Californian weather, of course, and if I could only have the English people and the Californian weather combined, everything would be grand. Everyone in the Royal Air Force is most kind to us all. They somehow seem to understand us and go out of their way to be helpful.

### *Winged Words*

It's grand to say hello to everyone on behalf of the Eagle squadron. You can be sure we will do our very best, because we're in this business to try and do a little job of work for England.

*October*, 1940

# ELEVEN AND A HALF HOURS IN A DINGHY AFTER BOMBING BERLIN

### BY TWO PILOT OFFICERS

*Our heavy bombers are nightly carrying our offensive to Germany, and over certain targets they meet with very active opposition from the ground defences. Searchlights are clustered around and cover the sky hunting for the raiders. Batteries of light and heavy anti-aircraft guns put up intense barrages. Generally our aircraft return safely, but it is inevitable that sometimes the guns inflict damage to the structure of the aircraft engaged. Fighter aircraft also go up at night in an effort not often successful to drive our heavy bombers off the target, but the bombers can stand up to a great deal of punishment, and still fly home, thanks to the splendid workmanship and material that go to their construction.*

*If, however, the tanks are so penetrated that the petrol runs out, aircraft may have to make a forced landing, either on land or in the sea. In the event of their landing in the sea, the crew at once take to their collapsible dinghy, and rescue procedure follows immediately. Here is a dialogue between two pilot officers who were compelled to come down in the sea, and they will tell you of their adventure.*

First Speaker: We were detailed some days ago to attack the Neukölln Gasworks in Berlin. There was a fair amount of cloud on the way out, but we reached Berlin on time, with the cloud tops at 8,000 feet. This cleared at 4,000 feet and when our dead reckoning indicated that we were over the targets, actually we were about forty miles north of it. Circling round we picked up a landmark that gave us our position and we flew towards the target. The gasworks were already on fire. We were not the only people on the target. So we made a direct run for it, climbing a little.

The Germans, however, had a few fighters up in the air and three of them came at us, so we went into the cloud, changed our direction, and later came over the target again. So that we could be sure of our bombing, we came down to 3,500 feet, and were met by all kinds of anti-aircraft fire. There was heavy and light stuff, and machine-gun fire as overweight. We tried to dodge that, came down to about 2,700 feet and bombed Neukölln all in one stick. Our bombs hit the target fair and square. There was a terrific bang, followed by blinding flames. Part of the gasworks certainly went up.

SECOND SPEAKER: I was the tail gunner, and I saw the fire. The captain had begun to climb as soon as the "bombs gone" was given, and we got to about 9,000 feet. That fire, from the height we were at, seemed to me to be about half a mile square, with flames three or four hundred feet high. Gas gives a very good blaze. There those flames were, a very angry red. I have never seen a fire so big in my life.

FIRST SPEAKER: Then we came right into nearly everything the Germans could give us. Their anti-aircraft put a hole three and a half feet square into the port wing, and there were between three and four hundred holes in the fuselage. When daylight came it was not necessary to put on the lights. Our aircraft are normally blacked out and we use interior lighting. The holes made that quite unnecessary.

SECOND SPEAKER: We could see the moonlight through the holes anyway.

FIRST SPEAKER: A high explosive shell went straight through the starboard tailplane. Luckily it went straight through without exploding or we should not even have come down in the sea. Then the leading edge of the port tailplane was shot clean away and the port wing badly battered. In fact it was smashed up but we climbed at plus two and a half pounds boost away from the target, to 10,000 feet, being shot at all the time. We were a bit out of luck.

SECOND SPEAKER: That's true. We were the only aircraft left over the target at the time. It was blazing away below us and they were blazing away at us, up there, and they could give us all their attention.

First Speaker: We set course to avoid all that dirt, and a bit later went over Bremen. We didn't have time to see much of what had happened there because we were shot at again. Then we flew towards home, passing through a very severe front.

Second Speaker: A bad front means dirty weather, and we found it.

First Speaker: We could still see no land for four hours after we had left the Neukölln Gasworks blazing merrily, and that meant that we were about an hour overdue. We had gone through a lot of very bad weather. It seemed as though our petrol tanks had escaped damage, but we were beginning to calculate our fuel, just the same. Off the Dutch coast we got our location. We were somewhat north of the track. We had had to take quite a lot of avoiding action. When we heard our location we came down through the cloud, working on the estimated time of arrival at a particular point. We got down to 1,500 feet, and found ourselves still over the sea. There was no land in sight. We flew on for a little more than half an hour. I thought we must have overshot England, and were over the Irish Sea. We turned again and sent out an S O S which was received and acknowledged. The trouble was that there had been a great change in wind speed and direction, of which we, of course knew nothing. Besides which our air speed was very much slower than normal because of the damage.

Then one engine cut out because of lack of petrol, and while the other engine was going I turned the aircraft head into wind in case I had to land in the sea.

Second Speaker: The captain had taken over the aircraft from the second pilot some time before, and asked to be strapped into his seat. They did that and the navigator came back to see that the rest of the crew were O.K. Orders were given to prepare to abandon aircraft and to land in the sea. So the dinghy was got ready and the Very lights and pistols were collected. The navigator began to hack away the door to use as a paddle.

First Speaker: I brought the aircraft down into wind, and the nose hit the crest of a wave. It crumpled straight up on the crash and I was drenched. That didn't matter, because I was going to be drenched in a couple of minutes anyway. The tail-gunner threw out the dinghy which didn't open at once. I climbed out of the escape hatch and walked along the top of the fuselage to see the tail gunner and second pilot in the water tearing the dinghy open with their hands. It opened upside down so we couldn't throw the bag of Very lights into it. They were thrown into the water in the hope that we could pick them up later; but the sea was so heavy they drifted away.

SECOND SPEAKER: The navigator clambered on to the dinghy, but overbalanced and fell out, caught hold of the life-line that had been hacked away, and the captain took a header into the sea to help right the dinghy.

FIRST SPEAKER: Two got into the dinghy and with the help of another member of the crew we pulled it on to the main plane when both of us clambered in. The navigator was still in the water, hanging on while we recovered our breath. We were pretty well humped out. He said he was all right, but after a moment he let go of the line and clung to the door, intending to hang on to the aircraft. Then the dinghy was swept against the tail plane and half of it burst and we could not right it. The navigator, still clinging to the door, drifted away and disappeared. We were helpless and couldn't reach him. There was too much swell. The aircraft floated for about five minutes in all and then went down tail first.

We first hit the water at seven-twenty a.m., and after we were in the dinghy tried to organise ourselves. It was only half inflated, and we were not very successful in getting it straight, but we sat and kept watch and after about an hour opened up the emergency rations, and found the rum and malted milk tablets. But we were very seasick and only the tail-gunner could keep anything down.

At about twelve-forty-five we saw the first Hudson aircraft above us, so we fired the only good emergency rocket we had. The aircraft saw us and circled round but lost us—we were so low in the water.

SECOND SPEAKER: We could see the aircraft circling round for the next four hours. They couldn't pick us up but we knew they would in the end, and at about three o'clock in the afternoon a submarine that was helping came within seven or eight hundred yards. They couldn't see us either.

First Speaker: By six o'clock I decided that we should have to spend the night in the dinghy and we started to bale it out. We had a pump, that didn't function too well what with one thing and another and we all sat in the middle and the sides lifted up. I think that saved us. It was just the merest fluke really, but when we got the sides up a Sunderland flying-boat spotted the dinghy, dropped sea markers and attracted another Hudson that was looking for us. The Hudson signalled with a lamp, "Help coming—launch."

Second Speaker: I had the rations, rum and other sorts, and had tried to pass them round, but the others were all so seasick they couldn't use them. There was no enthusiasm at all. I can tell you we sang no sea chanties in that dinghy. After a couple of hours one of the others produced a cigarette case; but the cigarettes were all wet and so were the matches. One of the crew tried to chew a cigarette, but he soon gave that up too.

First Speaker: And the rain simply streamed down and browned us off.

Second Speaker: We'd been pumping for nearly eight hours altogether and then we saw the wireless mast of what I thought was a destroyer. So I passed the rum rations again: but nobody wanted them. I was so excited that I drank two tots straight off: just to celebrate.

First Speaker: After half an hour the launch came up to us and tried to throw us a line. The wind was so strong it blew it back. So the crew of the launch tried another tack. They went up wind and drifted down and got us a line which we tied to the dinghy. Then a heavy wave knocked the launch on to us which tipped us over and we were in the water again, stiff with cramp and most of us nearly exhausted. That was six-forty-five, and we had been adrift for eleven and a half hours.

Second Speaker: The captain went right under the launch and up on the other side, but he had kicked his flying boots off and they caught him with a boat hook. It took five men to get the captain on board.

First Speaker: We were bundled down into the cabin and stripped. They put us into sleeping bags and blankets and gave us hot tea, massage and respiratory exercises. The wireless operator was all in. He had passed out. The tail-gunner had paralysed legs. But for two hours we slept, dead to everything, and the sea was so rough that it bounced me off on to the floor. Yet, through that sea the launch had come at its top speed, which was over thirty knots, and had travelled one hundred and thirty miles from land. There isn't enough to say about the way they did their stuff. They got us back to hospital and into warm rooms with heated beds where they simply cooked us for about four hours. The officers lent us their lounge suits and we had a very good party in the mess and the Station Commander sent his car for us and brought us home.

Second Speaker: After which we had sick leave and a bit of a holiday. Now we're going back to duty, but the funniest thing is that the night before we took that run I saw my horoscope in the newspaper. I don't believe them; but this is what it said: "Don't partake in long journeys, especially sea crossings."

*October*, 1940

# HOW A V.C. WAS WON

### BY A BOMBER PILOT

In order that you may get a clear picture of what happened that night, when my aircraft caught fire and when Sergeant Hannah performed that very fine act of bravery which earned for him the Victoria Cross, it would, I think, help matters if I described to you the interior of our Hampden bomber. In the nose of the machine sits the navigator. He is the most comfortably placed member of the crew. He can almost stand up and has plenty of leg room. I, as pilot, sit in another cockpit behind and above him and from the moment the aircraft takes off until it returns I do not leave my position. The other two members of the crew, who are the rear gunner and the wireless operator, occupy the top and bottom gun positions. They can however, if they wish, crawl through the aeroplane from one end to the other.

I have gone into these details so that you may, the more easily, realise that Sergeant Hannah had not only to contend with the raging flames but was called upon to extinguish them without at any time being able to pull himself up to his full height. It must be remembered too that he was wearing full flying kit which saved him from serious bodily burns but at the same time restricted his movements. Before I say anything more about Sergeant Hannah I want to describe, as best I can, what happened that night. If anybody had told me that only half the crew and three-quarters of the aeroplane would return to England I should have been inclined to laugh at them—but that's what happened.

We left in fine weather in high clouds and in due course we were over Antwerp. We started to make our bombing run but found that we were not in line to make a good attack, so we turned, circled round and got into better position. As soon as we arrived we noticed that the anti-aircraft gunfire was fairly heavy, but during that first run none of it came very close to us.

It wasn't long, however, before they got our range and as we came round for the second attack we met a terrific barrage. We were hit in the wing on the way down several times, and the aircraft shook so much that it was not an easy matter to keep control of it. However, we released our bombs and it was then that I saw flames reflected in my perspex windscreen, but I was so busy taking violent evasive action against the anti-aircraft guns that I didn't at first give it any serious thought. Whilst I was avoiding the shells—as best I could—the wireless operator called me on the intercommunication system and announced, very quietly, in his marked Scots accent, "The aircraft is on fire". I asked him "Is it very bad?" He replied, "Bad, but not too bad". I gathered from this conversation and from the fact that the reflection of the flames was getting brighter and brighter, that the position was fairly serious. Sergeant Hannah, cool as he was, did not want to alarm me. I immediately warned the crew to prepare to abandon the aircraft, at the same time I was still throwing the machine all over the place in an effort to dodge the shells some of which were ripping right through the fuselage and others seemed to be bouncing off. Besides this heavy stuff there was a lot of tracer shooting all round us, and I was not very keen on my crew jumping through that. Their chance of landing unharmed would have been small.

In the meantime the fire was getting an even firmer hold and I imagine that the blazing aircraft must have presented the enemy gunners with a pretty good target. After three or four minutes of more shells whizzing through us and past us I was relieved to find that we were at last out of range, and I think it must have been about this time that my navigator and rear-gunner jumped for it. There is no doubt that the navigator was quite convinced that there was no chance of the aircraft surviving, whilst the rear-gunner apparently had no option. He was literally burned out of his bottom cockpit in circumstances which must have made it impossible for him to stay there.

The fact that the rear gunner did jump gave Sergeant Hannah more freedom of movement. Whilst he was fighting the flames with his log book and with his hands I could feel the heat getting nearer and nearer to the back of my neck, but at the same time I noticed, when I turned round, that the flames were still some four or five feet away from me. At first Hannah was wearing his oxygen mask, but the fumes were evidently too strong and he found himself beginning to suffocate. So, without any hesitation, he ripped the mask off and dashed through the fire heedless of the burns which he could not possibly avoid. After about ten minutes, which seemed like hours, I noticed the reflection in the windscreen had died down and that in place of the heat at the back of my neck there was a welcome and refreshingly cool breeze. I asked the sergeant on the intercommunication system, which miraculously escaped damage, how things were going. He said, in his cheery manner, "The fire is out, sir". I then asked him how the other members of the crew were getting on. He said, "I'll find out, sir". He then went into the rear-gunner's cockpit and said, "Nobody here, sir". He then climbed forward to the navigator's position and reported "Navigator not present. We are all alone, sir". He then scrambled into my cockpit and brought me the navigator's maps so that I could steer a course for home. In turning round to take the maps from Sergeant Hannah I realised what he had gone through. His face was badly burnt, his flying suit was scorched all over, and altogether he looked a sorry sight. Through it all he was grinning and I then knew that although his injuries were severe they were not as bad as they looked. On the way back home Hannah sat in the navigator's position away from the smell of the fire, and when we landed he jumped out of the aeroplane as though what he had done had been an everyday occurrence. When I looked at the machine I got some idea of what he had gone through. The rear-gunner's cockpit and half the interior of the fuselage were charred ruins. There was a hole in the fuselage large enough for a man to crawl through. There were holes in the wings, but far more serious were the holes in the petrol tanks, and how the petrol didn't catch alight and undo all Sergeant Hannah's good work will remain a mystery. I believed that Hannah was fully conscious of that danger and concentrated on the flames nearest the tanks before he dealt with the other fires which broke out. To make matters even worse, while he was beating out the flames, thousands of rounds of ammunition were going off in all directions and he had to fight his way through this fierce internal barrage to save the aircraft. He didn't give his own safety a thought. He could have jumped, but preferred to stay behind.

*October*, 1940

# RAID ON STETTIN

### BY A SERGEANT PILOT

*The sergeant-pilot is twenty-one years old. He has made eleven trips as captain of aircraft. In* 1938 *he enlisted in the R.A.F.V.R. and was called up on the outbreak of war. He has done two hundred hours' operational flying and taken part in twenty-one operational trips. His trips have taken him to the Ruhr, to Berlin three times, to Milan, Magdeburg, Jena, and Leuna, in addition to attacks on the invasion ports from time to time. His intention, prior to joining the R.A.F., was to become a mechanical engineer.*

LAST Tuesday we were called in to be briefed, and told that our objective was the synthetic oil works at Politz, near Stettin. That meant something more than six hundred miles out and six hundred miles home. Roughly 1,300 miles for the round trip. When they briefed us—that is, when they told us all about the target, how to get there and what to do, it was pointed out to us that this oil plant was able to produce a million metric tons of fuel for the enemy every year, so long as it lasted. The intention of the raid was to make the oil last a very short time, and even though it means cutting the story I think I can say that that intention was carried out. The raid lasted about two hours, and I don't think the oil plant lasted as long as that. It was a blazing mass when we left.

Our Intelligence Officers told us that we should be able to identify it because of its position near the river and because it had six very tall chimney stacks clustered together at the south-eastern end. We were to attack in the neighbourhood of those chimneys.

The night was so clear, and the country so plain below us that we could map-read our course and pick up first one landmark and then another. I have been over there a few times, and so know much of the country, so does my navigator. We had the moon and the luck with us and could see everything. There was a fair amount of anti-aircraft fire at Cuxhaven, but there always is. We came through that all right, and flew on our course, striking the river that was our guide to the target, and avoided Stettin because we were on a particular spot and the town meant nothing to us, then.

Following the river in good moonlight, we realised that some other members of my squadron had been over the target before us. There was a lovely fire blazing which we could see for the last fifty miles. It was blazing away like the Fifth of November. It looked as though there would be nothing left for us to do but there was.

We came in from the north and the wind was blowing fairly freshly from the south. Until we reached the neighbourhood of the target we were flying fairly high. Then we began to glide, and losing height went in to have a look. At seven thousand feet we ran into a pall of smoke. Somebody had already hit the target a very good crack with their stuff. The place was well ablaze and smoke was coming up in thick, billowing waves. But through it all we could see just what we had been told to look for: the chimneys of the power-house, with this difference. We had been told that there were six chimneys. When we arrived there were only four. Somebody else had brought the other two down, but those four stood up, one of them slightly bent, like the crooked fingers of a maimed hand.

I decided not to attack from there and circled round out of the smoke. Below me lay the target, blazing merrily. This was a real military objective, not just a row of houses. There was a works building that I should judge to have been nearly four hundred feet long.

It was two storeys high and the flames were pouring from the windows. They went out into the open like great flashing tongues and came in violent gusts. Something inside that building was feeding the fire every second, and red flames and black smoke belched out without pause.

Then I saw the four chimneys that still stood and decided that that was my individual bit of the target.

We came in and bombed in two sticks. The first stick was high explosives followed by incendiaries, and it went straight across the target. There was no doubt of that at all; although I, being busy with handling the aircraft could not see the results then, the tail-gunner saw what happened, and reported that new fires had broken out, after good explosions.

Then I turned round and came in lower, to drop my heavier bombs. When the observer said "bombs gone" I circled at once, and saw two of the chimneys buckle up.

It was an amazing sight, and very hard to describe, but those chimneys went down straight for a while, and then fell over sideways, as though they were sinking to their knees. Then they toppled over on their faces. They were big chimneys and they fell into the heart of the fire, which spread rapidly like a red sheet on the ground.

The tail-gunner reported that another fire had broken out, and then an anti-aircraft gun started on us, just one, and it was wide. But there was plenty of anti-aircraft fire over Stettin, where we were not. Searchlights came up, too, and the tail gunner opened up with his machine-guns, from four thousand feet. Two searchlights went out.

When those chimneys had melted into the fire and our bombs were all used, we dropped our flares as incendiaries, too. We didn't need to bring anything back and flares can do some damage if they fall well. We left the target like an inferno. Flames were obscuring the ground, we could see the fire but nothing else. Smoke was filling the higher stretches of the sky, with a bright red glow lighting the underside of the cloud. If they put that fire out they must have performed miracles, because I have seen some good fires on various trips, but none to touch the blaze we left at Politz. The tail gunner was reporting every little while and he was still reporting the fire when we were a hundred miles on our way home.

We had a good run back, came to base on time, and met the others who had been on the same target. I think we might say production was definitely stopped and won't start again for a very long time. It was a good trip.

*October*, 1940

# RESCUE OF AN R.A.F. CREW IN THE ATLANTIC

### BY A FLYING OFFICER

*Recently the first job to fall to one of the American destroyers transferred to the British Navy was to rescue from the sea the crew of a Royal Air Force heavy bomber. By a remarkable coincidence the captain of the aircraft who is a recent rowing Blue, is himself half American and his mother is now in California. Here is his account of the crew's twenty-two hours' ordeal in the Atlantic.*

MANY people have said what a welcome addition the American destroyers would be to our fleet. I am sure that no one is likely to give them a more hearty and grateful welcome than that given by my crew and myself one afternoon a couple of weeks ago, when, after drifting aimlessly about in a rubber dinghy off the coast of Ireland for a very long time we suddenly saw on the crest of a wave the funnels of a destroyer.

It happened like this: We had been detailed to escort a convoy and had met it inward bound at about midday. Several hours later while we were still on patrol, the rear-gunner reported a trace of smoke from the starboard engine. I could see very little myself; the oil and radiator temperatures were quite normal and I was not unduly worried. I decided, however, to return to base at once and the wireless operator reported to base that we were doing so. But almost immediately our trouble increased, the engine got very hot—and so did I—and it was only a matter of a very few minutes before we found ourselves cooling rather rapidly in the Atlantic.

I saw clouds of smoke pouring from the engine, the temperatures shot right up, and I had to throttle the engine back to prevent it catching fire. We were only at about 500 feet at the time and the aircraft would not maintain height on the other engine. I told the crew to stand by for a landing on the sea, and our dinghy drill had to be carried out pretty rapidly. The tail-gunner came forward to the dinghy, the second pilot and the navigator went aft, followed by the wireless operator after he had finished sending his S O S. They all braced themselves for the shock of hitting the water. This we must have done with quite a crack, in spite of my efforts to hold off as long as possible and reduce speed, as the fuselage broke nearly in two just forward of the leading edge of the wings. The cockpit immediately began to fill with water and I thought it was time for me to be moving. I climbed out through the escape hatch in the roof and found the rest of the crew in the sea with the dinghy which was just opening.

I scrambled across the gap in the fuselage and walked aft. The dinghy was fully open and the rope tying it to the aircraft had been cut but it was still caught in the angle between the fuselage and tailplane so I was able to step straight into it. This was a great stroke of luck as the hardest job is usually to get the first man into the boat. We pushed ourselves clear of the aircraft and then I helped the crew in. The wireless operator was the most urgent case as he had hit himself jumping in and had swallowed a lot of salt water when he went under; he was very nearly unconscious. We got him in after quite a struggle and the rest of the crew came aboard in turn. The aircraft had sunk by the time the last had got in.

This happened at about four o'clock in the afternoon; there were about three hours of daylight remaining, and of course we hoped very much that our S O S would have been received and that we should be picked up or at least sighted that afternoon. We were at the time within sight of land, but a strong south-westerly wind was carrying us away out to sea. Darkness fell without a sight of ships or aircraft and we resigned ourselves to at least another fourteen hours afloat. At first we could see the beam from a lighthouse, but that disappeared by midnight, as the wind which was increasing nearly to gale force blew us farther from land.

There were only three things to do all night, to keep awake, to keep warm and to try and keep the boat as dry as possible. We had all, except the rear gunner, swallowed some salt water and were seasick. I was lucky and was not very bad, but some felt most unhappy inside all night and wanted very much to go to sleep. However we all kept awake and found three exercises which seemed the most practicable for keeping warm. First we would pat our hands briskly on our thighs, that warmed both hands and thighs and was our commonest exercise, which later in the night we did about every ten minutes. Then we did the "cabman's swing" swinging our arms across our chests as taxi-drivers do on cold days, and we found that good for keeping the circulation going. Finally we smacked each other on the back. I must have been somewhat vigorous in this last exercise as my neighbour said it was too much like being hit by a pile-driver. We did our best to keep cheerful and as my watch was watertight and working I reported the time every half-hour and the number of hours to daylight. It was a great landmark at one in the morning when the night was half over and then six hours only to go.

I found also that I kept warm by baling out the water, which we did with my shoes. At first we shipped water quite often as the tops of the waves broke over us. Later, though the seas were steadily rising with the wind increasing through the night, we became quite expert at riding the huge Atlantic rollers, and found that if we kept two of us facing into the wind and two with their backs to it we could watch the waves and by leaning away from the bad ones ease ourselves over the top of them without shipping water very often.

The night passed very slowly indeed. I had decided not to open the rations till morning as I knew we should be much hungrier then. I am afraid I adopted rather a Captain Bligh of the *Bounty* line over the rations as I wanted to make them last for three days. Dawn crept upon us at about six-thirty after an apparently interminable night of back-slapping and wave-climbing. It was quite light by seven-thirty, and we were out of sight of land, but suddenly to our joy we saw a ship in the west. It got larger and was heading almost in our direction; then it altered course and came straight for us. We stood up in turn and waved and we all shouted, but she was to windward and neither saw nor heard us. We could see her quite clearly and she passed within two or three hundred yards and was, I think, a small armed merchantman. That was a dreadful disappointment as we had practically decided what we would have for breakfast; biscuits and brackish water were a very poor substitute for bacon and eggs. However as some slight consolation and to warm us up I allowed us each a very small swallow from our rum flask, which I was saving for emergencies.

We saw several aircraft during the morning, but even those fairly near did not spot us because the sea was a mass of white horses. About ten o'clock the rear gunner was washed overboard by a wave breaking crossways over us, although he was sitting on his hands holding the rope as we all did. However, he kept his hold and we got him aboard again, and did our best to warm him up with rum and exercise.

At midday there were more biscuits and Horlicks tablets for lunch, but I don't think we were really hungry yet as some of the crew wouldn't eat their biscuits. I told the crew that we should probably have to spend another night in the dinghy and they stayed remarkably cheerful in spite of this dreary prospect.

Suddenly about 2 p.m. we thought we saw some ships in the distance. All the morning, however, we had been seeing low islands and lighthouses which proved to be merely the crests of waves breaking in the distance, so I didn't have much faith in any of these ships. Then we started looking round again and to our joy saw from the crest of a wave a flotilla of destroyers steaming towards us in line abreast. The second pilot recognised the four funnels and flush deck of the American destroyers and we thought that they would pass on either side of us. Then as they drew near they altered course away from us so that we passed to port of the port ship of the line. We held the rear-gunner up and he waved our green canvas paddle. Just as we had about given up hope again we saw people waving from the decks and she turned in a circle round us.

Soon after she came alongside and threw us a line, at first shouting directions in German, as they had mistaken our uniforms.

The ship was rolling heavily and when our navigator caught hold of the rope ladder he could not get a foothold and as his hands were too cold to keep a grip he fell into the sea. A sailor at once jumped in, put a line round him and he was lifted out. The rest of the crew and myself were able to climb aboard. We were taken below and had our skin practically rubbed off us before we were wrapped in blankets and put in officers' cabins, with tea and rum and hot food, all extremely welcome.

As soon as I was warm I borrowed some clothes and went on the bridge to thank the captain. I learned that it was he who had first spotted us when he saw through his glass our yellow skull-caps and life-saving jackets and dinghy, which he thought was some wreckage as we appeared and disappeared on the distant waves.

We were all made most abundantly welcome by the Navy and went ashore that night very happy men indeed.

# W.A.A.F. IN AIR RAIDS

### BY A FLIGHT OFFICER

I DON'T suppose airwomen on stations feel any different during raids from what ordinary people do in towns when *they* are bombed. If you've got a job of work to do you get on with it. Otherwise most people go to the shelters, except of course, those who are on station defence duty.

You'll want to know which of the Women's Auxiliary Air Force are on duty during a raid. Well, the switchboard operators for one; they are usually airwomen. Then there are first-aid workers, sick quarter attendants, anti-gas squads, and of course the plotters in the operations room.

Plotters particularly have proved that those members of the R.A.F. were justified who said that women could be trusted to carry out operational work in air raids. They have shown they have plenty of nerve. So too, have the telephone operators. These W.A.A.F. who got the Military Medal this week were all telephone operators, and it was a good thing they kept their heads and stuck to their job, because the station defence really depends a great deal on them. As for the plotters, I know of one who had half a table where she was working bombed away, but she went on with her job. Two others had a shed blown down over them, but when they were dug out they were still sticking to what they had been doing before the bomb fell.

And it isn't only on the station that airwomen show how cool they can be in an emergency. One W.A.A.F. was coming back from leave by train when an incendiary bomb fell in the carriage. Her cap was burnt, all but the badge. She herself was almost unhurt and only suffered slightly from shock. She was off work for one day, but was quite recovered by evening and came on duty again ready for the next raid that night.

There seems to have been something about that train. When it stopped during the raid, another W.A.A.F. ran out into the fields. A bomb came very close so she threw herself on her face and felt that she had landed on something hard. When she had got to her feet she picked up the object and asked an airwoman who was with her if she had dropped it. They looked more closely at it and found it was an unexploded bomb. The little crowd who had gathered round scattered in no time, while the W.A.A.F. very calmly replaced the bomb on the ground and walked away.

We rather like to feel, you know, that members of the Women's Auxiliary Air Force keep their heads in a crisis. We *are* proud to feel that we have been trusted to work in the front line helping the R.A.F.

*November*, 1940

# RAID ON MUNICH

### BY A FLIGHT LIEUTENANT OF A HEAVY BOMBER SQUADRON

THIS was our first trip to Munich. Our target was the railway locomotive and marshalling yards, almost in the centre of the city and only a short distance away from the famous Brown House of the Nazi Party. Just before we took off the senior intelligence officer came rushing over and said he thought that we might be interested to know that Hitler and some of his gangsters were to be in Munich that night to celebrate the anniversary of the BEER HALL Putsch of 1923.

Everybody was flat out to get there. They had included in my bomb load one of the heaviest calibre bombs that we have so far carried. I talked things over with the observer and we decided before we left that as the station commander had been kind enough to entrust us with the delivery of this heavy calibre bomb we'd go in as low as possible to make sure of getting the target. It was a beautiful starlight night and there was almost a half moon. We were checking up our course by the stars as we went out. Round Munich itself there was not a cloud in the sky. We passed an enemy aerodrome—all lit up for night flying—but on the way out we weren't wasting any bombs on that. We saw one of our fellows flying about five miles in front of us, getting a packet of stuff thrown up at him over Mannheim. He flew straight through it, but we turned away to the left and avoided the town. After Mannheim, Munich wasn't very far away and everybody was sitting up and taking notice. We were about twenty minutes' flying-time away when we first saw the flak and the searchlights coming up around the city. The navigator got a bit worried because we were ten minutes in front of our estimated time of arrival and he thought for a minute that we might have got off our course. Then we picked up a landmark—

a goodish-sized lake—to the south of Munich—and set course from there. Some of the other fellows had gone on ahead to light up the target and we could see their incendiaries bursting.

Flares were dropping all round as we went in. The guns on the ground were shooting quite well. I saw three flares shot down almost as soon as they had been dropped. We flew over to have a preliminary look at things and found we were about a mile south of the marshalling yards. We were low enough and it was so light that we could see houses and streets quite clearly. It was the bomb aimer's dream of the perfect night. Altogether we stooged round for about twenty minutes, checking up on our target. We saw somebody else drop his stick of bombs slap on the target. The explosions lit up the locomotive sheds. We came down lower and they were shooting at us hard. In the light of one of our own flares I saw a stationary engine in the yard. I could make out the glow from its fires and I noticed, incidentally, that it had steam up. We had to turn round and come back over the yards, making our run from south-east to north-west. Then we went whistling down. Tracer seemed to be coming up right under the wings and the bomb aimer said that he could see it coming up towards him as he lay in the nose of the aircraft looking down through his tunnel.

All the way down in the dive I could see these big black locomotive sheds in front of me.

The front gunner was shooting out searchlights, which I thought was a pretty good effort, and the rear gunner was having a try at the same game, but it was more difficult for him. I'd told them that they could let loose with their guns and they didn't want telling twice. The bomb aimer got the target right in his sight. He said: "I can see it: I can see it absolutely perfectly." Then he called out: "Bombs gone. I've got it." As a matter of fact I don't see how he could have missed at that height. Both he and the rear-gunner saw the bombs burst. The rear gunner said that the heavy one made a dickens of an explosion. In the excitement I'd more or less forgotten that we had got this big bomb on board and the force of the explosion gave the aircraft a tremendous wallop. If we had come down any lower we should have been blown up. As it was we all thought we'd been hit. The effect was just as if a heavy shell had burst right under the rear turret. There was a stunned silence for a few seconds; then another babble of conversation when everybody decided that we were all right.

We were still low down. Searchlights kept popping up. The front gunner put out two and the rear gunner put out four. It was a remarkable sight to see the coloured tracer going down the beams of the light. After that, it was a race back because we'd been told that the weather would close down over our base and that after two o'clock we'd be very lucky if we got in there, so we beetled back pretty rapidly. Altogether it was a perfect trip.

# BOMBING DANZIG

### BY A FLYING OFFICER

*With the longer hours of darkness the bombers of the Royal Air Force are striking farther and farther afield. Italy and Czechoslovakia have already felt the weight of their attack and now Poland has been brought within the sphere of their nightly operations. For the layman it is difficult to visualise just what these long-distance raids involve, with their many hours of flying over enemy territory, their dangers and their discomforts. Here is an account by an R.A.F. flying officer, the navigator of a heavy bomber returned from a raid on Poland, which gives some idea of what such a flight is really like.*

The trip I am going to try and describe to you this evening was from England to Danzig and back. Danzig, of course, is a port at the Baltic end of the former Polish Corridor, and the journey was roughly equivalent to a non-stop flight from London to Madrid and back. The total distance, including necessary deviations, was something like 2,000 miles. Most of the credit for the flight belongs to the sergeant-pilot who was at the controls of the aircraft. For over eleven hours, without relief, he sat in his small cockpit, constantly on the alert and liable as captain of the aircraft, to be called upon for instant decision in any emergency which might arise. For us other members of the crew the strain was much less severe. When things were running smoothly we could take our minds off the job in hand and some of us, if we became too cramped, could get up and stretch our legs. But not the pilot. He had to stick it, and, looking back, I still think that his staying power, matching that of the great engines which carried us on the long journey, was the most remarkable feature of our flight.

When we were first told that Poland was to be our destination we were just about as pleased as we could be. Apart from the fact that the long flight promised some excitement, we were particularly bucked at the idea of cheering up the Poles by taking a crack at the invaders on their very doorstep. We'd already proved the idleness of Goering's boasts by repeated hammerings at Berlin and now this trip would give us the chance to show that we could not only elude his anti-aircraft defences in Germany, but fly right over them to help our friends on the other side.

We set off in daylight. There were four of us in the aircraft: the pilot, two air gunners, one of whom was also the wireless operator, and myself. I was the navigator and it was my job to guide the aircraft to the target and bring it safely home again.

The sky was clear and the sun was shining when we started, and it was still daylight when we crossed over the North Sea and into enemy territory. We were all keyed-up and keeping a sharp look-out for enemy fighters, but none came our way. Perhaps it was just as well for them that they didn't. We were determined that we were going to get to Poland that night and if anything had got in our way it would have had a warm reception. Our gunners' trigger-fingers were itching to go into action and our pilot, still fresh and alert, was ready to take any evasive action that might have been necessary.

Actually, that part of our trip over Germany was so quiet and uneventful that it might well have been peacetime. But soon after the sun had set the weather changed. It became steadily worse and for practically all the rest of the outward journey remained thoroughly bad. As we flew further east we ran into a snowstorm and within half an hour the interior of my cockpit was some two inches deep in snow. It was fine and powdery, and when I wanted to use my maps I had to blow the snow away before I could read them. The snow also managed, somehow or other, to get into my fur-lined coat, but as I was so cold by then, a little snow, more or less, didn't make much difference to me.

Apart from the snow, we also had to contend with a particularly violent electrical storm, and although none of the static penetrated into the aircraft I could see it striking the propeller tips and making the airscrews look like a couple of Catherine-wheels. I've never seen anything like it before—and I don't particularly want to again.

Later on, as a change from the elements, we had a taste of enemy opposition. It came in the form of a certain amount of anti-aircraft gunfire, but it didn't really worry us. What it did do was to tell us that the enemy knew we were in the vicinity and it gave us rather a kick to think of the hundreds of air-raid sirens that were being sounded at every town and village along our course. We knew we were Poland-bound, but the Hun could have had no idea where we were going.

We reached Danzig at last, and just to look down on the Baltic Sea was enough to give us all a tremendous thrill. It looked so peaceful with the moonlight shining on the water and a background of cloud on the distant horizon. To do justice to the scene requires a poet rather than a navigator, so I won't attempt to describe it. Then I got on with the job of searching for our target.

One thing I had to bear well in mind. If there was any possibility of my bombs falling on the civilian population then I must not drop them. As we circled the city unmolested by searchlights or anti-aircraft fire I spotted our target, a railway yard. Railway yards, whether they be at Hamm or Danzig, look much the same, and as we came low the moon glinted on railway buildings and tracks, and there, spread out before us, was the old familiar network.

I told my pilot I was ready to bomb, but he wasn't taking any chances. "You're quite sure of it?" he called out, and only when I had reassured him did he straighten up the aircraft for the bombing-run.

As we approached the target I took careful aim through my bomb-sights. The light was so good and the target so big that I just couldn't miss. The next thing I heard was a call from the rear-gunner. He had seen the bombs burst and they had started quite a large fire. It was obvious from the lack of opposition from the ground defences that we had taken the enemy by surprise. Or perhaps they had forgotten something we had remembered—that it was the anniversary of Poland's Day of Independence.

After we had dropped our bombs on our enemies in Poland, we had the more pleasant task of delivering leaflets to our friends the Poles. Though none of us could read Polish, we had all studied the circulars with great interest before we set off. We were able to make out two passages. One of them was the news that President Roosevelt had been re-elected in the name of Democracy, and the other was "Long Live Poland!"

And just in case there are any Poles listening to this broadcast, I'd like to end with the only Polish word I know—"Dobsha!"—or, in English, "It's all right!"

*November*, 1940

# A HURRICANE SQUADRON ATTACKS TWENTY-FIVE JUNKERS 87s

### BY A FLIGHT LIEUTENANT

YES, it really was a good day for the squadron. We caught about twenty-five Junkers 87 dive bombers attacking ships off Orfordness. We shot down fifteen of them into the sea, probably destroyed seven others and damaged one more. So that out of the twenty-five dive-bombers making the attack, only two escaped us without bullet-holes in them.

We all seemed to have a hunch that there were going to be fireworks that afternoon, and decided to stay in the crew-room instead of going across to the mess for tea. We were quite right; for at about ten minutes past four, we had orders to take off and patrol over one of our convoys. We were all in the air within three or four minutes. We had been patrolling the convoy for about ten minutes, when looking towards the south I suddenly saw the bursting of anti-aircraft shells about twelve miles away, some distance from the coast. I called up the other boys on the radio telephone and off we went towards the bursting shells. We were a few miles away when I saw the first of the enemy bombers diving down on some objective we could not see. The weather was not very good; there was a sea fog reaching up to 2,000 feet but at 10,000 feet where we were the sun was shining brightly. So I led the squadron round to get the advantage of the sun and down we went on to the enemy. We found that three or four of them at a time were dive-bombing ships from 7,000 feet; they were taking it in turn to go down vertically, one behind the other. I told the squadron to attack from somewhere below 2,000 feet and to choose their own targets. Down we went, taking the enemy completely by surprise as we did their escort of Messerschmitt fighters.

We dived down and got within range of our targets below a thousand feet and then we gave them "the works". We attacked them in pairs, one of us giving the enemy a good burst and the other doing what he could to finish him off.

And this is what happened to me: first of all I went after one Junkers—a sergeant-pilot followed when I broke away and did him a lot more damage. The bomber went waffling out to sea, looking very sorry for himself. Bits had been shot off him, so we claimed him for a probable as he didn't look as though he would get very far. Then looking round again I saw another bomber at only a few hundred feet above the sea. So I got right behind him and opened fire and kept on firing all the time I was overtaking him. I could see my bullets hitting him and his rear-gunner stopped firing almost immediately. Then I got really close to him and shot him up again.

Suddenly the Junkers blew up in the air. I think I must have hit a bomb, for there was a yellow flash and a cloud of black smoke. The explosion gave me a bump for as I broke away, blinded by the smoke, my Hurricane shuddered and dropped quite a distance. I couldn't see what happened to the bomber after that, but some of the boys said afterwards that it fell in little pieces over quite a big area of the sea. It was an extraordinary show—one moment the bomber was there, the next there was a big cloud of black smoke in its place.

After that I circled round for a few minutes searching for something else to take on and soon found another bomber which I attacked with the last of my ammunition. When I had used it all up and had broken away, another of my Hurricanes took over and attacked him. He was so badly damaged that he became one more of our probables.

While this had been going on, the rest of my squadron had been doing grand work and that day was definitely the best day for the squadron that I can remember. It was such a quick job and took only five minutes' fighting to clear the air of Germans. I mentioned just now that we took off at ten minutes past four and at a quarter to five we had landed on our aerodrome again.

# A TALK ON ELEMENTARY FLYING TRAINING

### BY A FLIGHT LIEUTENANT INSTRUCTOR

I'VE been doing elementary flying instruction for a couple of years now, and during that time many lads have passed through my hands and have become pilots.

At the school where I am an instructor we use light training types of aircraft. The particular type I instruct on has certain special qualities. In the first place it is easy to fly *somehow*, in the second place it is difficult to fly really well, and lastly, but perhaps most important of all, you have to fly it very badly and foolishly if you are going to crash it and possibly hurt yourself.

I would like to say just a word about this term "Elementary Instruction". A surprisingly large number of our pupils have never been in the air and in nine cases out of ten the pupil has never before handled the controls of an aeroplane. But at the end of his elementary training the pupil can, by himself, land the aeroplane consistently well, find his way from one aerodrome to another maybe fifty or more miles away, perform all the usual aerobatics, fly under the hood by the sole use of his instruments, and make a safe landing almost anywhere in the event of an engine failure. When he leaves us he goes on to the Service Flying Training School, where he carries out more advanced training.

I think the best way of giving you a picture of elementary training from the instructor's point of view is for me to try and describe the sequence of instruction from the day a new pupil arrives until the day he leaves.

When a batch of new pupils arrive at the school they are divided into two squads so that while one squad is flying, the other squad is attending lectures. Each instructor is given his quota: it may be any number between two and seven. Next morning all the pupils are to be found waiting outside their changing room looking, not unnaturally, rather uncomfortable at first in their new flying kit. I remember on one hot summer afternoon, I found a new pupil clad in a Sidcot suit with teddy-bear lining, lambskin flying-boots, two pairs of gloves and a thick woollen scarf wound several times round his neck! I think he must have been wearing every single item of kit with which he had been issued. Actually, of course, a light overall to keep one's shirt and trousers clean is all that is necessary in that sort of weather.

Then, having found my pupil, I have a chat with him so that I can size him up and find out whether he has had any flying experience. The pupil then gets into the rear cockpit and I show him how to secure his safety harness and connect up his telephone so that we can talk to each other when we ate in the air. After explaining to him the various controls and instruments and telling him to leave everything alone for the time being, I get into the front cockpit, start the engine, taxi out and we take off.

The first quarter of an hour is taken up in climbing gently to about 3,000 feet while I point out some of the local landmarks and try to get him to settle down in his new environment.

After that the pupil begins to learn how to fly. First of all, I show him the effect of each control, making him try them himself and he learns that by co-ordinating them he can keep the aeroplane first straight, then level, and in the end, both straight and level. After about half an hour of this we fly back to the aerodrome, the pupil flying the aeroplane as far as possible, though as soon as we get near the aerodrome I take over and make the approach and landing. That ends the pupil's first lesson.

Before we actually take off for the next flight—probably about an hour later—I show him how to start the engine and how to taxi the aeroplane about the aerodrome. We then take off again, climb to a reasonable height and do a bit more straight and level flying. If he is a fairly apt pupil he goes a stage further and learns how to climb, how to glide, and what happens when flying speed is lost and the aeroplane stalls.

I should like to emphasise that, from the very earliest stage, as far as possible the pupil does all the flying except during short intervals for demonstration. Of course, the instructor has to do the taking-off and landing during the first few hours of dual, but as soon as the pupil can put up some sort of a show he does all these manœuvres himself, assisted by advice only if it should be necessary.

The third day probably sees a start made in taking-off and landing. He will now spend anything between three and ten hours doing practically nothing else but taking-off, flying round the aerodrome, gliding down and landing. In other words doing circuits and bumps.

It isn't that the actual landing or take off is difficult in itself, but judgment has to be developed and there is a great deal to judge! For instance, the pupil has to find out the strength and direction of the wind, his speed over the ground, his height and whether he is going to clear the hedge comfortably or whether the instructor's voice is going to come down the telephone: "Put your engine on and go round again." All these important points and many others have to be studied.

During this period the pupil is learning much more than just how to take off and how to land. He is improving his flying all the time. He is beginning to feel that he is really part of the aeroplane and he learns to manœuvre his machine so as to avoid other aircraft, whether they are in the air near him or sitting on the ground just where he thinks he is going to land.

Then, after what seems like ages to the pupil, I decide he is just about ready to fly solo. At about this stage, he will do a trip with the flight commander or some other instructor who either confirms my view or suggests some weakness which he has spotted and which must be put right before the pupil finds himself in the air alone. When we are quite satisfied about him, the great moment arrives. I undo my straps. "Off you go." I tell him: "One more circuit like the last, but by yourself this time. Don't be afraid to put your engine on and go round again if things don't work out just as they should, but I know you'll be all right." As I get out of the cockpit I secure the straps so that they will not foul the controls; and another fledgling spreads his wings.

I watch him make his circuit, confident in the knowledge that the landing on a pupil's first solo is usually his best so far. When he has landed, he taxis back feeling like a dog with two tails. "Don't get away with the idea that you are a pilot already," I warn him, "you've got a lot to learn yet." However, it would take more than that to damp his present enthusiasm.

So instruction goes on and as each new stage is reached, the pupil goes off to practise solo what he has learnt dual. From time to time he will be taken up by the flight commander or the chief flying instructor for a test. He learns how to put the aeroplane into difficult situations, such as a spin, and how to recover from them. He learns what to do in the event of a sudden engine failure. A forced landing means finding the direction of the wind, selecting a suitable field, and losing height so that the aeroplane can be brought into the field and landed just as on the aerodrome. This needs quite a lot of practice because there is no engine to put on to go round again and have another shot at it. He is taught cross-country navigation by the aid of his compass and map. Every now and then he has to pull a hood over his cockpit and he is taught to fly by the use of instruments only. This enables him eventually to fly long distances through cloud or fog. He is shown how to perform such aerobatics as the loop, slow roll, roll off the top of a loop and others.

And all the time ground subjects and flying are going along side by side, and in a relatively short time he has learnt all that we can teach him and he is ready to go on to his Service Flying Training School.

You may imagine that instructing is a tedious job. Not a bit of it! It's the most interesting job in the world. No two pupils are ever alike. Each requires different handling; for instance, checking the over-confident one, encouraging another who rather lacks confidence, and so on, until eventually the high standard required is reached and the standard is high, as high as ever it was, in spite of the present intensive training. It takes a lot of patience, but it seems a worthwhile job when your ex-pupils come back to visit you with several Messerschmitts to their credit. Good luck to them all.

*November*, 1940

# ATTACK ON LORIENT SUBMARINE BASE

### BY A FLIGHT LIEUTENANT

You may remember a rather exciting film called "The Dawn Patrol". If you do, it is just a point of interest for me to begin by saying that I belong to the Royal Air Force Squadron that was represented in it. The squadron dates back to the last war. It is still going strong, taking its share now in the vast work that is being done day and night by the Coastal Command.

Lately, our squadron has been doing its bit in making the ports on the other side of the Channel uncomfortable for their temporary tenants. Cherbourg, Brest and Lorient have been most frequently on our daily lists. Lorient was probably a new one on many people. It was a new one on most of us when we were first told to bomb it.

Our attacks on Lorient are now regular news. Lorient—on the Brittany coast about ninety miles south of Brest—has become a U-boat base and maintenance depot. It isn't giving away any secrets to say that our targets there are power stations, naval yards, slipways, torpedo workshops and so on. Some of us have been so often to Lorient lately that we must know the way into and around it better than its temporary German inhabitants. Now we know every yard of the country and its landmarks. We always see Lorient clearly when we attack it—at dusk or dawn, or in light provided by the moon or by our flares.

And the enemy always gives us a hot reception. All sorts of stuff come up at us—light and heavy shells, flaming red things which we call "onions" and what-not.

The other night the armourers of our Squadron were given their first operational flight. Their job is on the ground—to fit and load our bombs. The idea in taking them with us was that they could study what happens when their bombs burst.

"How did you get on?" one of them was asked afterwards.

"Coo—great stuff," was the reply, "all the colours of the rainbow. Lovely it was from the gallery seat." I don't think I would choose the word "lovely" myself, but let it pass.

I wonder if I can give you a sort of mental picture of how we set about things on one of these raids. An hour before the take-off we assemble in the Operations Room to be told all about the job in hand. Then off everyone goes to attend to his own particular end of things. The observer gets the weather report; a gunner who is also the wireless operator makes certain that the guns are O.K. Then he checks up the recognition signals and the wireless frequencies and sees that the pigeons are in their wicker basket—we always take homing pigeons with us. And the pilot gets into his head all he can about the trip and the targets.

Before we leave the ground I test the microphone which enables me to talk to the gunner in the rear turret and to the rest of the crew.

"Hello, gunner—are you all right behind?"

And then to the observer: "Hello, observer, course to steer, please."

Some of us carry mascots. I always have the joker of a pack of playing cards and a couple of German bullets—relics of being shot up on one trip.

And now come with me over Lorient. As we approach it the observer suddenly shouts: "I see the target—yes, I've got it!" "O.K." I say. "Master switch and fusing switch on!" These are the switches which control the fusing and the release of the bombs. Round just once more to make quite certain. The docks and the outlines of the naval buildings show up a little more clearly. Then I throttle the engines back.

"Running on now," I tell the observer.

"O.K.," he says, "left—left—that's it—steady—a shade right—*hold it*—NOW!"

He presses the electric button which releases the bombs. The aircraft gives a slight shudder as they go through the doors.

"Bombs gone!" cries the observer.

Down they go, hundredweight after hundredweight of high explosive. My observer is watching for the results. Have we scored hits or just got near misses? I see many bright flashes. Then big flames flick skywards like the fiery tongues of monster serpents. Showers and towers of ruddy sparks burst from the ground.

My observer nearly jumps from his seat, waving his hands in excitement. "We've hit it—we've hit it!" he yells. "We've damned well hit it!" Then home we go—our umpteenth visit to Lorient on the Brittany coast has ended.

*November*, 1940

# THE FIRST FIGHT WITH THE ITALIAN RAIDERS

### BY A CANADIAN FLIGHT COMMANDER

*The first raid by the Italian Air Force on Great Britain was an event keenly awaited by the fighter pilots of the Royal Air Force. The luck of the draw fell to a Hurricane squadron. But when the Italians came over that day, the squadron leader, much to his annoyance, was having a day off, and the squadron was led into combat by a Canadian flight commander from Edmonton, Alberta. Here is the story of the fight.*

WELL, we started with the usual afternoon blitz, just like any other day during the past three months, and we were ordered up on patrol out to sea. Our job was to join up with another Hurricane squadron, as their bodyguard. When we were about 12,000 feet up, I saw nine planes of a type I had never seen before, coming along. They were in tight "V" formation. I didn't like to rush in bald-headed, until I knew what they were, so the squadron went up above them to have a good look at them. Then I realised that at any rate they were not British, and that was good enough for me. So we went into attack starting with the rear starboard bomber and crossing over to attack the port wing of the formation.

I must say that the Italians as they turned out to be, stood up to it very well. They kept their tight formation and were making for the thick cloud cover at 20,000 feet, but our tactics were to break them up before they could do that and we succeeded. I singled out one of the enemy and gave him a burst. Immediately he went straight up into a loop. I thought he was foxing me as I had never seen a bomber do that sort of thing before. So I followed him when he suddenly went down in a vertical dive. I still followed, waiting for him to pull out. Then I saw a black dot move away from him and a puff like a white mushroom—someone baling out. The next second the bomber seemed to start crumpling up and it suddenly burst into hundreds of small pieces. They fell down to the sea like a snowstorm. I must have killed the pilot. I think he fell back, pulling the stick with him—that's what caused the loop. Then he probably slumped forward, putting the plane into an uncontrollable dive. But what usually happens then is that the wing or the tail falls off, and it was a surprising sight to see the plane just burst into small pieces.

Then I started to climb again and I saw another two of the bombers in the sky. They were mixed up in a fight and were both streaming smoke. At that moment another one shot past me flaming like a torch, and plunged into the sea. After seeing that I thought the battle was over and I could go home, but just as I turned to do so I saw a dog-fight going on up above with another type of aeroplane I had never seen before. They were Fiat fighter biplanes. There must have been about twenty of them milling round with the Hurricanes. I went up to join in the party, but the fighter I singled out saw me coming and went into a quick turn with me on his tail. His plane was very manœuvrable, but so was the Hurricane and we stuck closely enough together while I got in two or three bursts. It was a long dog-fight, as dog-fights go. We did tight turns, climbing turns and half-rolls till it seemed we would never stop. Neither of us was getting anywhere until one of my bursts seemed to hit him and he started waffling. For a moment he looked completely out of control and then he came in at me and we started all this merry-go-round business over again. I got in two or three more bursts and then ran out of ammunition. That put me in a bit of a fix and I didn't know what to do next. I was afraid if I left his tail he would get on to mine. Then he straightened up—he was just thirty yards ahead and I was a few feet above. At that moment I decided that as I could not shoot him down I would try and knock him out of the sky with my aeroplane. I went kind of nay-wire. It suddenly occurred to me what a good idea it would be to scare the living daylight out of him. I aimed for the centre of his top main plane, did a quick dive and pulled out just before crashing into him. I felt a very slight bump, but I never saw him again and somehow I don't think he got back.

By now the scene had changed a bit. Another squadron of Hurricanes was chasing the Italians all over the sky. I did not know at the time, but I found when I got down that their squadron leader was a great friend of mine from my home town of Edmonton, Alberta.

He bagged a couple in that fight.

And now I thought it's home for me, but the day wasn't over yet. As I was flying back, keeping a good look-out behind, I saw a Hurricane below me, having the same kind of affair with a Fiat as I had just had. I went down and did a dummy head-on attack on the Italian. At 200 yards he turned away and headed out to sea. I thought: "Good, I really can get home this time," but just before I got to the coast, still keeping a good look-out behind, I saw another Hurricane, with three Fiats close together worrying him. So down I went again, feinting another head-on attack, and again when I was about 200 yards away the Italians broke off and headed for home. That really was the end of the battle.

I was a bit worried because my plane had started to vibrate badly, but I managed to land all right. Just as I had got out of my Hurricane and was walking away—my fitter and rigger ran after me saying that I had six inches missing from one of my propeller blades and nine inches from another. All the same, it certainly was a grand day for the squadron.

*December*, 1940

# AN UNUSUAL COMBAT AND BALE-OUT

### BY A FIGHTER FLIGHT LIEUTENANT

*This Flight Lieutenant was awarded the Victoria Cross*

That day was a glorious day. The sun was shining from a cloudless sky and there was hardly a breath of wind anywhere. Our squadron was going towards Southampton on patrol at 15,000 feet when I saw three Junkers 88 bombers about four miles away flying across our bows. I reported this to our squadron-leader and he replied: "Go after them with your section." So I led my section of aircraft round towards the bombers. We chased hard after them, but when we were about a mile behind we saw the 88s fly straight into a squadron of Spitfires. I used to fly a Spitfire myself and I guessed it was curtains for the three Junkers. I was right and they were all shot down in quick time, with no pickings for us. I must confess I was very disappointed, for I had never fired at a Hun in my life and was longing to have a crack at them.

So we swung round again and started to climb up to 18,000 feet over Southampton, to rejoin our squadron. I was still a long way from the squadron when suddenly, very close in rapid succession, I heard four big bangs. They were the loudest noises I had ever heard, and they had been made by four cannon shells from a Messerschmitt 110 hitting my machine.

The first shell tore through the hood over my cockpit and sent splinters into my left eye. One splinter, I discovered later, nearly severed my eyelid. I couldn't see through that eye for blood. The second cannon shell struck my spare petrol tank and set it on fire. The third shell crashed into the cockpit and tore off my right trouser leg.

The fourth shell struck the back of my left shoe. It shattered the heel of the shoe and made quite a mess of my left foot. But

I didn't know anything about that, either, until later. Anyway, the effect of these four shells was to make me dive away to the right to avoid further shells. Then I started cursing myself for my carelessness. What a fool I had been, I thought, what a fool!

I was just thinking of jumping out when suddenly a Messerschmitt 110 whizzed under me and got right in my gun-sights. Fortunately, no damage had been done to my windscreens or sights and when I was chasing the Junkers, I had switched everything on. So everything was set for a fight.

I pressed the gun button, for the Messerschmitt was in nice range; I plugged him first time and I could see my tracer bullets entering the German machine. He was going like mad, twisting and turning as he tried to get away from my fire. So I pushed the throttle wide open. Both of us must have been doing about 400 m.p.h. as we went down together in a dive. First he turned left, then right, then left and right again. He did three turns to the right and finally a fourth turn to the left. I remember shouting out loud at him when I first saw him: "I'll teach you some manners, you Hun," and I shouted other things as well. I knew I was getting him nearly all the time I was firing.

By this time it was pretty hot inside my machine from the burst petrol tank. I couldn't see much flame, but I reckon it was there all right. I remember looking once at my left hand which was keeping the throttle open. It seemed to be in the fire itself and I could see the skin peeling off it. Yet I had little pain. Unconsciously too, I had drawn my feet up under my parachute on the seat, to escape the heat, I suppose.

Well, I gave the Hun all I had, and the last I saw of him was when he was going down, with his right wing lower than the left wing. I gave him a parting burst and as he had disappeared, started thinking about saving myself. I decided it was about time I left the aircraft and baled out, so I immediately jumped up from my seat. But first of all I hit my head against the framework of the hood, which was all that was left. I cursed myself for a fool, pulled the hood back (wasn't I relieved when it slid back beautifully) and jumped up again. Once again I bounced back into my seat, for I had forgotten to undo the straps holding me in. One of them snapped and so I only had one to undo. Then I left the machine.

I suppose I was about 12 to 15,000 feet when I baled out. Immediately I started somersaulting downwards and after a few turns like that I found myself diving head first for the ground. After a second or two of this, I decided to pull the rip-cord. The result was that I immediately straightened up and began to float down. Then an aircraft—a Messerschmitt, I think—came tearing past me. I decided to pretend I was dead, and hung limply by the parachute straps. The Messerschmitt came back once, and I kept my eyes closed, but I didn't get the bullets I was half expecting. I don't know if he fired at me; the main thing is that I wasn't hit.

While I was coming down like that I had a look at myself. I could see the bones of my left hand showing through the knuckles.

Then for the first time I discovered I'd been wounded in the foot. Blood was oozing out of the lace-holes of my left boot. My right hand was pretty badly burned, too. So I hung down a bit longer and then decided to try my limbs, just to see if they would work—thank goodness they did. I still had my oxygen mask over my face, but my hands were in too bad a state to take it off. I tried to, but I couldn't manage it.

I found, too, that I had lost one trouser-leg and the other was badly torn and my tunic was just like a lot of torn rags, so I wasn't looking very smart. Then, after a bit more of this dangling down business, I began to ache all over and my hands and legs began to hurt a lot.

When I got lower, I saw I was in danger of coming down in the sea. I knew I didn't stand an earthly if I did, because I wouldn't have been able to swim a stroke with my hands like that. So I wriggled about a bit and managed to float inland. Then I saw a high tension cable below me and thought it would finish me if I hit that. So I wriggled a bit more and aimed at a nice open field.

When I was about 100 feet from the ground I saw a cyclist and heard him ring his bell. I was surprised to hear the bicycle-bell and realised that I had been coming down in absolute silence. I bellowed at the cyclist, but I don't suppose he heard me. Finally, I touched down in the field and fell over. Fortunately it was a still day. My parachute just floated down and stayed down without dragging me along, as they sometimes do.

I had a piece of good news almost immediately. One of the people who came along and who had watched the combat, said they had seen the Messerschmitt 110 dive straight into the sea, so it hadn't been such a bad day after all.

# THE R.A.F. BOMBS A U-BOAT

### BY A CANADIAN FLYING OFFICER OF COASTAL COMMAND

For some time we had been looking forward to catching a U-boat sitting as pretty as the one we attacked the other day. We had sighted U-boats several times before, while we were patrolling the North Sea, but too often they were able to spot us and submerge before we could attack, and then we had to rely on damage done to them when they were beneath the water.

This time we attacked one just as it was stepping into its own back-yard.. It was the sort of chance that we in Coastal Command dream of.

Our reconnaissance patrol of three Lockheed Hudsons was near the Norwegian coast, and we had just turned to come back, when we found the U-boat slinking home. We were flying at about 7,000 feet in clear weather, when we saw it only a few miles away. Its outline was unmistakable. We were up-sun, so our position was ideal and I hoped we could deliver a shock attack before the German look-out men saw us.

We wasted no time. "Tich," my co-pilot, was flying at the time, and we turned towards the U-boat, leading the other two aircraft. We went into a spiral dive, and I climbed down into the nose and checked the bombing gear.

I don't think the Jerry realised he was being attacked until he saw us screaming down with our bomb doors open. It was then far too late for him to submerge, but the gun on his conning-tower opened fire at us from about 300 yards. We felt the aircraft being hit two or three times, but carried on with the attack and released the bombs in a stick. One of the bombs scored a direct hit on him just abaft the conning-tower and others burst close beside his hull. We passed directly over the U-boat while we were still diving.

As Tich tried to level out, he pulled the stick right back. Nothing happened! The elevator had been hit and was quite useless. The sea was coming up at us pretty fast and the question was—could we pull out before we hit the water? I had my fingers crossed! But Tich knows his job—we've been in some tight spots together—and he got to work on the tail trimmer. This is manipulated by a little handle like that on an old-fashioned telephone. Tich was winding away for all he was worth, and at the same time opening the throttles to get the maximum help from the engines.

It all happened so fast that I hardly had time to appreciate our narrow squeak, and a few seconds later we managed to manœuvre into a climbing turn.

The other two Hudsons had followed behind us, delivering further attacks. We turned round just in time to see the last of the U-boat. The other bombs had dropped right beside it and we saw its stern lift right out of the water. It submerged nose first and I saw its fins and elevators disappear in a swirl of oil and bubbles. We thought it most unlikely that it would ever return to its base. And that was that.

So then we started on our flight home, which we knew would be a tricky business without the elevator. As we left the U-boat, Tich shook the stick backwards and forwards, and laughed at me when nothing happened. (Tich, I may say, has a particularly broad and infectious grin that goes right across his face.) I checked the petrol tanks and found one was empty and another leaking. Nearly 150 gallons had so far gone with the wind. I laughed back at Tich!

But we found that by using the tail trimmer we could keep a fairly straight course, although we were porpoising a bit. The awkward moment, of course, was going to be when we tried to land the aircraft in one piece. So on the way back we talked over how it was to be done. With no elevator, the difficulty would be, of course, to stop the aircraft gliding straight into the ground, for the elevator determines your angle of flight—climbing, gliding or flying level.

So we decided to split up the controls between us. I was to work the wing-flaps and throttles, while Tich would make the best possible use of ailerons and rudders. The tail trimmer, which had helped us to pull out of the dive on the submarine, wouldn't be much use now because of the slower landing speed.

Thank goodness our remaining petrol was sufficient to take us back to our base, and on arriving there we circled round to land. The medical officer, who is inclined to be a bit pessimistic, was out on the aerodrome with his ambulance, but we didn't plan to give him any business this time. Tich was quite rude about it. He seemed to regard the doctor's precautions as a reflection on his piloting abilities!

As we approached to land, the rear gunner left his turret and jettisoned the door to facilitate jumping out if it became necessary, but, thanks to our pre-arranged plan, everything went well. We had a hectic few minutes, but in the end landed very nicely. I have seen plenty worse landings with everything working properly. The other two aircraft had escorted us home, and were very relieved that we got down whole. As a matter of fact, so were we!

*December*, 1940

# A SQUADRON LEADER DESCRIBES HIS SQUADRON'S BATTLE WITH THE ITALIANS

*The commanding officer of* 603 *(City of Edinburgh) Auxiliary Fighter Squadron, who gives the following account of his most successful day, has fought with the squadron right from the beginning of the war. When the first raiders appeared over British soil in* 1939, *his squadron was the first to go into action and he himself was one of the first to open fire on enemy aircraft over this country. He was a pilot officer then. Now he has been in command for several months—months during which the squadron has added over* 100 *victims to their previous score.*

In this particular battle I was largely in the position of a spectator, so I can tell you all about it. I was leading the squadron when my engine began to misfire and splutter. So I called up one of my flight-commanders and told him to lead while I broke away and tried to clear my engine. By diving and roaring the engine, I managed to make it run smoothly again and then took up position at the rear of the squadron.

We had taken off at about eleven-forty that morning. It was a sunny day with a slight ground haze which developed into mist from 18,000 feet up to about 26,000 feet. We were on a routine patrol with another squadron and after patrolling for forty or fifty minutes we were ordered to go here and there to investigate various raids which were reported over land and near the coast. While we were climbing through some cloud we lost touch with the other squadron.

We carried on alone and were on a southerly course approaching Dover, when we were warned to look out for a formation of Italian aircraft. Every man was immediately on the alert. By this time I was at the back of the squadron and I heard the formation leader suddenly report aircraft dead ahead of us. At the same time someone else reported unidentified aircraft to the east, but the leader wisely held our course to fly towards the aircraft he had already seen. After a couple of minutes we saw the enemy aircraft flying south-west down the Channel. They were still some distance away and were 1,000 feet below us. They were Italian fighters—C.R. 42s—and were well over the sea flying at about 20,000 feet. When I first had a good look at them they gave me the impression of a party out on a quiet little jaunt. There were about twenty of them, flying along quite happily in good formation.

When the leader gave the order to attack and told us to sweep round and down on their tails, we were in a very advantageous position. Our machines must be about 100 m.p.h. faster than the Italian fighters and it was dead easy to overtake them and blaze away. They were flying in a sort of wide fan-like formation and when we went to attack each of our pilots selected his particular target. You can imagine how effective the first few dives were when I tell you that one of our pilots at one time saw six Italian fighters either on fire or spinning down towards the sea.

The Italians looked quite toy-like in their brightly-coloured camouflage and I remember thinking that it seemed almost a shame to shoot down such pretty machines. I must have been wrong, for the pilot who saw six going down at the same time said afterwards that it was a glorious sight. But I must say this about the Eye-Ties: they showed fight in a way the Germans have never done with our squadron. It is true, though that they seemed amateurish in their reactions. By that I mean they were slow to realise that we were anywhere near them until it was too late. Another thing, they kept their formation very well, but it didn't save them.

After a short while the Italians were dodging this way and that to escape our aircraft as best they could. One of them broke formation and turned towards France. I chased him and fired at him several times. I believe I hit him, too, and would have finished him off if my engine hadn't begun to splutter again when I was half-way across the Channel. So I left him to limp home while I turned towards the English coast to find the rest of the battle. It had vanished by this time, so I came home. The whole fight lasted only ten or fifteen minutes.

*December*, 1940

# A CHANNEL CONVOY

### BY A FLIGHT LIEUTENANT OF BALLOON COMMAND

BEFORE the war the waters round our shores were full of merchant vessels, carrying what is known as coast-wise traffic. They called, I suppose, at almost every port around our shores, picking up a cargo here, landing a cargo there. The particular coast traffic with which I am concerned is what is known as the Channel Convoy and we help in escorting merchant vessels through the Straits of Dover and down the Channel. Before the collapse of France this was a reasonably easy task, but nowadays you see, there is a certain difference of opinion between Mr. Winston Churchill and Adolf Hitler as to whom this stretch of water actually belongs to.

Now, as you know, the Navy are past-masters at escorting convoys; they know every trick of the trade and should Jerry's fertile imagination create some new situation which had not previously arisen, they would soon adapt themselves to deal with their novelty. One new situation that he has created however, is that of the dive-bomber and whereas this method of attack is in no way confined to this stretch of water, it is certainly much more likely to be met with than in most other parts. Now, a ship at sea, when all said and done, is really a very small target, providing the attacking planes are not allowed to dive too low, and it is here where we of the Balloon Barrage do our bit. Each convoy is accompanied by vessels of the Royal Navy, carrying balloons; these are placed at vantage points amongst the convoy, thus, in a sense, the escorted vessels are placed inside a box, with the Navy acting as the four walls of the box and the balloons acting as a lid. You may wonder how efficacious are these balloons in a dive-bombing attack. Actually I have never spoken to a German pilot so as to know what they think of them, but I have discussed the subject on many occasions with our own pilots and they have invariably told me that they hate them like hell, treat them with the greatest respect and avoid them like the plague. I must say that from my own personal experience, when Jerry has made an attack on us, he seems to concur with our own pilots' views, as invariably he sends Me. 109s over first to attempt to shoot down the balloons, thereby making way for the dive-bombers following very close behind them. We have our own method of competing with those 109s and I must say it seems extremely effective, as on many occasions the bombers have arrived only to find all the balloons still flying, with the result that dive-bombing has to be turned into precision bombing, which considerably reduces their accuracy. To give you some idea of what one of these trips is like I want you to imagine that you are with us on one of these convoys. It is about tea-time and we are heading south towards the Straits; the sun is setting over the English coast and we wallow along at a steady pre-arranged speed. The black-and-red colours of the merchant vessels are flanked by the sleek grey lines of the escort vessels. Overhead the silver of the balloons shines in the fading light. Every man is on the "*qui vive*", every gun is manned, and it would be idle to deny that we are all keyed up. Suddenly out of the setting sun three planes are spotted, guns are trained on them, but our fire is held—are they hostile or friendly? In a matter of seconds there is a roar, and it is seen that each plane is diving at a different balloon. All our guns open fire and the dusk is lit up with hundreds of tracer bullets. By this time the planes are turning again from the east and preparing for a second attack; once more they come and once more hell is let loose from every ship. It is clear that the barrage from the escort vessels is too much for Jerry and he makes off towards the French coast, having failed to destroy the balloons.

At this stage it is a safe bet that the dive-bombers are lurking not very far away, and sure enough, in a very few minutes there is a roar from a very great height as eight or sixteen or twenty-four planes swoop down on the convoy. But things have not gone according to their plans, for the balloons are still flying and they cannot come low to drop their bombs, and, in fact, their dive-bombing is turned into precision bombing. This sudden upset, coupled with the fact that the pilots must keep a weather eye on the balloons and the cables, upsets their accuracy and their bombs fall harmlessly into the sea. They very often fall extremely near to their object, but direct hits have been turned into near misses and no damage is done, and with a zoom the planes return to their bases, many of them, it is hoped, bearing scars to remind them of where they have been. For a moment the tension is relaxed and it is now nearly dark and we are approaching the Straits. Not a light is to be seen, not a cigarette glows, as we creep on steadily, running according to schedule. At this stage we are more or less convinced that the big guns on the coast ought to have been informed of our approach and as the steward said to me on a recent trip: "Will you have your tea served before the shelling or afterwards, sir?" The sun has completely gone and the moon is throwing far too much light on the sea for our liking. The white cliffs of England can be clearly seen and the searchlights light up the sky of the French coast. Suddenly, large flashes are seen on the coast and streams of flaming onions rise out of the sky. More flashes follow and we know that our Bomber Command are having their private party. Apparently no one is taking any notice of us—we hope. Suddenly there is a loud crash and a great column of water rises into the air some distance ahead on the port bow and we know that the mine-sweepers are doing their work. By now we are in the narrowest part of the Straits. Flashes of bombs from the French coast, the stream of anti-aircraft tracers and the number of searchlights increase, while on the English coast searchlights leap into action as we hear planes pass overhead. Sometimes it seems that the searchlights from the two coasts almost meet above, while we, silent and unobserved, creep down the archway they form. Being optimists, we still believe nobody knows we are there—but this must be numbered among famous last hopes, for from the French coast four wicked yellow flashes light up the sky, and we know that the guns on the French coast have started. The Commander on the bridge invariably turns round and says: "Starting counting chaps,'' and some seventy-five seconds later four enormous crumps are heard and four great columns of water shoot up into the air. And so it goes on until the whole convoy has steamed out of range of the guns, and we wait for any other surprises Jerry may have for us until dawn breaks when we eagerly count up the ships and satisfy ourselves that all the flock is safe. Then we continue our stately wallow to our appointed destination, whilst Jerry has another "go" by air or not, as the case may be, and I can tell you that it is a grand feeling when it is all over and one has the privilege of seeing the merchantmen, laden to their eyebrows, safely home and knowing that Mr. Winston Churchill is right and that it *is* his Channel.

*December*, 1940

# RAID ON TURIN

### BY A FLYING OFFICER

THIS was the first time our squadron had done the Italian trip. We'd heard a rumour about a week before that we might be getting the job and everyone was quite thrilled at the idea of the run over the Alps. We were told in the morning that we were going to Turin and so we started at once drawing our tracks and getting the navigation generally weighed up. My navigator was particularly keen on the show because he's something of a mountaineer and has done a fair bit of climbing in the Alps.

The route we were taking worked out at between twelve and thirteen hundred miles there and back. We had to make a bit of a detour to keep clear of Switzerland because we had special instructions to avoid infringing Swiss neutrality.

Briefing was at two o'clock in the afternoon and we took off just as it was getting dark. To start with, the weather was poor and we had to come down to six hundred feet over the English coast to pinpoint ourselves, then we climbed up through what was becoming really nasty weather, and crossed the coast on the other side fairly high. By that time the cloud was what we call ten-tenths—that's to say, it obscured everything, but eventually we got above cloud and then we had the light of the moon which was in its first quarter. Before that it had been very dark indeed.

We were flying blind above cloud until we arrived forty or fifty miles east of Paris and then we ran into clearer weather, the clouds gradually decreased below us until we could see the ground, and when we reached southern France the weather was perfect. It was one of those clear moonlight nights when the stars seem to stand out in the sky and you feel you can put out your hand and grab one.

As we flew on towards the Alps, we could make out some of the little mountain villages against a background of snow, the whole scene resembled a picture on a Christmas card.

The aircraft was going wonderfully well and we cleared the highest mountains we went over by three or four thousand feet. You could see the ridges and peaks, well defined, and the moon shining on the snow was half turning the night into day. Flying over this sort of scenery was something completely new to us and pretty awe-inspiring. The nearest we'd got to it was on the Munich raid when we'd seen the Bavarian Alps in the distance. The navigator came up and pointed out Mont Blanc, away on our port side. He was able to identify it from its shape because he'd actually climbed it, and he was telling us how he was beaten by the weather when he got to within six hundred feet of the summit.

Immediately we got to the other side of the Alps, with no snow about, it seemed by comparison, intensely dark for a bit. It was like coming out of a lighted room into the black-out.

Soon after that we started to glide down, losing height very gradually and arrived slightly west of Turin. Other planes were already over the target because we could see their flares and there was a barrage of anti-aircraft fire in the sky.

Our target was the Fiat works, and the whole time we were looking for them we were still gliding down to our bombing height. Actually we picked the works up in the light of somebody else's flare. They were unmistakable. I've never had such a target before. There seemed to be acres of factory buildings. We almost wept afterwards because we hadn't got any more bombs to give them.

Having located our target we flew four or five miles away, turned round and made our run up over it. The wireless operator came along and stood beside me to have a look at the bombing, otherwise he wouldn't have seen anything from his usual position. He's a bit of a wag and when he saw the light flak coming up from the works he said: "Gosh, look at the Roman candles."

We made two attacks and as we came round afterwards to have a look, the fires which we'd started were going strong. There was a big orange-coloured fire burning fiercely inside one block of buildings. Having finished the job, we climbed to get enough height to cross the Alps again.

Altogether we were over or round about the town for three-quarters of an hour and whilst we were circling to gain height we saw somebody hit the Royal Arsenal good and proper.

Going home, the Alps didn't look quite the same. The moon had almost set then and the mountains had lost their vivid whiteness. The last two hours of the journey home were, frankly, plain misery. It started with the aircraft suddenly beginning to get iced up. I tried to climb, but she wouldn't take it. Ice was coming off the airscrews and hitting the fuselage. We came down to about seven thousand to thaw out and then we ran into an electrical storm. All this time we were in cloud. It was frightfully bumpy and the aircraft was bucketing about all over the place. At one point the front gunner called me up and said: "Are you quite sure you're flying the right side up, because I think I can see white horses in the sky." That was when we were over the North Sea. When eventually we left the clouds we had to come through snow and sleet and the final bit of the journey we made in a howling gale which reduced our ground speed a lot. Never had we ever taken so long to get inland to our base from the coast, but we got there safely in the end.

*December*, 1940

# TORPEDOING A GERMAN TANKER

### TOLD BY A WING COMMANDER

*Aircraft of the Coastal Command of the* R.A.F. *have had considerable success lately in torpedoing enemy shipping from the air. The commander of a squadron which has been engaged in these attacks, tells you how they are carried out.*

THE squadron of Coastal Command which I command has lately had the job of doing from the air what the U-boats attempt from under the sea—that is, the job of torpedoing enemy shipping.

The U-boats which manage to slip past the Navy can find British shipping all over the oceans—we ourselves often fly over huge British convoys during our patrols. But the German ships can only creep along their own coastline, or that of countries which they have occupied, slipping along close inshore under cover of their land batteries and fighter aerodromes, escorted by "flak-ships".

So that's where we have to go to hunt the German ships. If we run across enemy aircraft on the way over, we fight them. We also do reconnaissance, take photographs, and bring back information for the weather people.

But our main targets are German supply ships. They are our big game. And when we find them, we attack them with torpedoes, which are slung from the aircraft and launched from the air.

You can take it from me that the squadron scoreboard isn't too bad so far, and although we've only been operating a short time, many thousand tons of German shipping will never see its own harbour again.

The air crews of my squadron, in order to achieve this, fly in all sorts of weather—rain and storm and mist. They cheerfully run the gauntlet of the enemy's coastal defences, flying where the Germans do not always expect to see a British aircraft.

So much so, that when the other day one of our aircraft suddenly swooped through the mist on to a German mine-layer, itself heavily armed and surrounded with flak-ships, the captain evidently mistook the aircraft for a German. For he ran up and down his bridge, flashing the signal "U" at our aircraft. "U" is the International Code for "You are running into danger".

It might have been more appropriate the other way round.

To give you an idea of what this job is like, let me tell you the story of one actual sinking of an enemy ship. It was carried out by a crew of four—the pilot, the navigator, the air gunner and the wireless operator. I would have liked the pilot to give you this talk instead of me. But unhappily that cannot be. The other day, on a similar mission, his aircraft failed to return. He was last seen going into all the shell-fire imaginable to make sure of his aim before releasing his torpedo.

So here is the story of the sinking of an oil tanker, which they carried out only the other day. I telephoned Dick, the pilot, that afternoon in his flight office at the aerodrome, to tell him he was off on a roving commission. Then I met the crew of four in the operations room, to tell them what area they were to search, and to give them all the weather information received from other pilots—actually it was wretched weather, with rain, low clouds, and very poor visibility.

Dick went off to see the torpedo properly shipped on his Beaufort and within an hour they had taken off. They flew over to the Dutch coast, popped into one or two harbours to see what shipping was about, and then set off along the coast-line, periodically dodging bursts of fire from the German shore batteries and flak ships.

They had practically reached the Danish coast, still in this filthy, grey weather, when they suddenly came upon two big German ships escorted by a flak ship. The attack was all over in a minute or so. The pilot headed straight for the larger ship, a 7,600-tonner. He called to his crew that he was about to attack. He and the navigator hastily worked out the ship's course and speed, and the air-gunner was warned to watch out for the run of the torpedo.

Flying a few feet above the water, and at very close range, the aircraft released its torpedo. Then the pilot had to turn violently, only just missing the bows of the ship with his wings, and coming close enough for the navigator to read the name painted on her. About five seconds later the gunner shouted: "Whoopee! We've got her." And then: "Gosh, she's up in flames." They circled round, in spite of flak, and saw the ship ablaze—she was an oil tanker. Flames reached eighty feet above her and smoke 400 feet above that. They brought home a photograph of her, which you may have seen printed in the newspapers. And when they got back, they confessed to me that they had turned the return journey into a sing-song inside their aircraft.

I never saw four fellows better pleased in my life.

# WORK OF THE MAINTENANCE CREWS

### BY A FLIGHT SERGEANT OF FIGHTER COMMAND

*The British fighter pilot has proved himself supreme in combat. There are several reasons why. Firstly, he is well trained, secondly, he is flying the best fighters in the world and thirdly, his aircraft is always kept in tip-top condition. To see that his Spitfire or Hurricane is fighting-fit every day and often many times a day, is the work of the maintenance staff. The author of the following account is a flight sergeant in charge of the maintenance crews of a Hurricane flight. The squadron has destroyed* 100 *Nazi raiders. Fighter Command's first V.C., Flight-Lieutenant Nicolson, was serving in this squadron when he won his decoration.*

You can take it from me that the maintenance crews are "flat out". Each aircraft has its own crew. As a result everybody is very proud of the fighter in his charge. And a healthy rivalry develops, too. They are like the boys in racing stables who groom their own particular horse, call it pet names, slap it affectionately and kiss it when it wins a race. When they hand it over to the jockey on the big day they believe that their horse is the best that money and care can produce. The maintenance crews on our Hurricanes are like that. I've seen them in the morning, taking the covers off the aircraft, slap it under the belly and say something like: "Come on, you beauty, plenty of Huns to-day, please!"

Once a pilot came back from a battle after shooting down a Junkers 88 and two Messerschmitts. The crew that serviced that Hurricane did a war dance and went about swanking to the other crews. They regarded the three at one crack as *THEIR* work. Then I've heard them comparing notes like: "How many bullet-holes did yours get back with to-day?" And the reply: "Only one." And then the first crew say triumphantly: "One bullet?

That's nothing! We had seven in ours, and they were all repaired in no time!"

But that is where the rivalry ends—with good-natured high spirits. It begins with real, hard work, but competitive work, mind you. There is keen competition when the aircraft come back to re-arm and re-fuel. One day, when the squadron landed almost at the same time—I mean in quick succession—it took the maintenance crews only eight and a half minutes to re-arm and refuel the lot. Eight and a half minutes from the moment the first machine landed to the time the last machine was ready for the air again, each aircraft having been filled up with petrol and ammunition for another battle.

We work long hours, but we don't mind. Our day starts at dawn. The first task is to take the sleeves off the main planes and the canvas covers off the cockpit hoods. Then the pickets which have tied the aircraft down all night are taken up.

The fitter gets into the cockpit and the rigger stands by the starting-motor. The engine is started up and run until warm. Then, should there be an alarm, there will be no trouble about starting the aircraft or getting it off the ground quickly.

Suppose there is an alarm. The message comes through by telephone and immediately I dash out and shout the signal for every crew to go to their own particular aircraft and start up. At the same time the pilots come from their crew-room and scramble into their aircraft. Sometimes the pilot arrives at the same time as the crew, but as often as not the engine is started when he races up. If it takes more than two and a half minutes from the warning to the time all the aircraft are in the air—well, there is usually an inquest at which I am the coroner. If there has been any delay I want to know why, because every second is precious and might mean the difference between ten Huns or no Huns at all.

Well, eventually, the fighters come back. Perhaps they have been in action. As soon as the first one lands it taxis towards the waiting ground crew. A tanker goes alongside to fill up the petrol tanks. At the same time the armourers re-arm the eight Browning guns. The rigger changes the oxygen bottles and fits the starting-motor to the aircraft so that it is ready for the next take-off. Then the rigger takes some strips of fabric which he has brought with him from the crew-room and places them over the gun holes. It helps to keep the guns clean and also helps to keep the aircraft 100 per cent efficient in the air until the guns are fired.

Meanwhile, another member of the crew searches the aircraft for bullet holes and the electrician goes over the wiring and the wireless mechanic tests the radio set. Every little part of the aircraft is O.K. before the machine is pronounced serviceable again. All this process should take no more than five minutes, but we allow seven minutes for the whole job.

As I said a moment ago, we once serviced a squadron which came back more or less together in eight and a half minutes.

If a Hurricame comes down with a few bullet holes, it is my job to see if the injuries are superficial or not. If there are holes through the fabric, we quickly patch them up. If there is a bullet through the main spar, then it is a case of a new wing. Should a machine be found by me to be unserviceable, a spare aircraft is brought for the use of the pilot until his own machine is ready.

So the day goes on, this routine happening perhaps two, three, or four times a day. Finally, at nightfall, we make the daily inspection. The armourers clean the guns, the fitter checks the engine over, the rigger checks round the fuselage and cleans it, and the wireless man checks the radio set. The instruments man checks the instruments. When everything is O.K. and the necessary papers signed, the machine can be put to bed. The sleeves are put on the wings, the cover is put over the cockpit, the pickets are pegged into the ground and the machine left, heading into the wind, until dawn.

It sometimes happens that an aircraft needs, perhaps a new undercarriage. That means working far into the night until the aircraft is ready to fly again. I remember working with other members of the crew fitting a new undercarriage to a Hurricane which had been damaged on landing. We started at four o'clock in the afternoon and we didn't finish until four o'clock the next morning. But when that aircraft came back the next day with a few Huns to its bag it made all our labour well worth while.

Like the pilots, we eat our food when we can. If the squadron is sent off at, say eleven o'clock in the morning, and we know that they probably won't be back for at least an hour, we go for lunch. But we always leave a spare crew on duty to deal with any aircraft—maybe from another squadron—which might land.

The crews take great pride in the aircraft in their charge. They call their Hurricanes by pet names, always starting with the machine's appropriate letter. Thus you get a machine with the letter "F" called Freddie, "Q" Queenie, and so on. They paint mascots on the aircraft, too. "Freddie," for instance, bears a picture of Ferdinand the Bull. Another aircraft has a witch on a broomstick, another has George and the Dragon, and they usually paint a tiny swastika along one panel for every Hun the pilot has got. They keep the aircraft spotlessly clean, too. After each trip it is wiped clean of oil and every other day the Hurricane is washed and scrubbed with soap and water. And they wash behind the ears, too, as though they were washing a small schoolboy!

As you may guess, there is not much time for fun and games. Most of the recreation—darts, shove-halfpenny and such like, are played in the camp, but now and then the airmen get a day off to enable them to find relaxation outside. But generally, they are quite happy staying in camp. During the summer-time our hours are from about three-thirty a.m. until ten-thirty p.m., but in winter the hours of daylight are short, giving us a chance to rest.

May I say a word about the fighter pilots? I think they are a fine lot—as good as R.A.F. pilots ever were. I've been in the Service since I was a boy in 1923—I'm only thirty-three now But I've worked for some grand people. Once I was with some members of the Schneider Trophy teams—when they were instructors at a Central Flying School teaching younger men—now fighter pilots, I suppose—to fly.

I am Cornish, though my wife now lives with our three children in the village of Ryther near Selby, Yorkshire. My family are boatbuilders in Falmouth and a great-great-grandfather or something like that, of mine, was a Petty-Officer in Nelson's *Victory*.

He helped to conquer one dictator. I hope to do my bit in conquering this dictator.

*December*, 1940

# R.A.F. TRAINING

### BY AN ACTING PILOT OFFICER UNDER INSTRUCTION

It's several months now since a very Junior Acting Pilot Officer first put on, perhaps a bit self-consciously, a very new R.A.F. uniform, and admired himself in a mirror.

I remember how naked he thought the uniform looked without the pilot's wings over the left top pocket, and how he wore his greatcoat on every possible occasion, to cover up that enormous gap of blue cloth where, one day, he hoped wings would grow.

Well, to-day, that uniform isn't quite so new, and its wearer perhaps not quite so self-conscious; but he still puts on the greatcoat, even on a sunny day, because those wings aren't there yet. In a few weeks maybe—but, at the moment they're—well, shall we call it—semi-sprouting.

It's about this half-fledged state of mine, and how I've got to it, that I'm going to talk now.

When I first joined the Service I was plunged into something which I didn't think I was going to like very much. It was called a disciplinary course, and, being a very undisciplined sort of person, I approached it in a "nasty medicine" sort of way—with a "I know this is going to do me good but all the same I don't want to take it" sort of attitude.

But I must say—I rather enjoyed it. I was taught how to march instead of slouch; how to be drilled, and to drill, and, very important, how, when, where and whom to salute. After the first few hours of this I realized that there was a higher art on the barrack square. This surprised me, rather like finding out at the age of twelve that rice pudding is really quite palatable. But it was so—as anyone who has ever seen the shambles resulting from giving, say the command "Halt", on the *left*, instead of on the *right* foot, will appreciate.

By the time I could get a squad on the move, and halt it again without having everyone falling over everyone else's feet, I was posted to an E.F.T.S. I became, in fact, a pupil pilot—or, in other words—a "Nit"—the derivation of this term is obvious—and, in most cases, I fear—justified. It certainly was in mine.

An E.F.T.S. is an Elementary Flying Training School, and there I joined in with a lot of other "Ni——"—er—pupil pilots—who had just come from an Initial Training Wing. There they'd already had instruction in several useful things like Morse, and navigation and armament—which put them a bit up on me—because I didn't know a "da" from a "dit" at Morse, or a Browning breech block from a sewing-machine shuttle.

The main job of the E.F.T.S. was to teach us to fly. But, in the case of people like me, who thought they could fly a bit already, the instructor had a double job to do—first showing us that we couldn't fly and then teaching us the right, proper official and R.A.F. way.

My instructor (and I hope he isn't listening) was a very tough and exceedingly competent Flight-Lieutenant, with that odd mixture of patience and explosiveness which forced his pupils to keep on their best performance all the time they were flying with him. I shan't forget his remark to me on my first bit of dual. He told me to do some turns. I pushed the aeroplane round to the right in my most polished manner. Silence from the front cockpit. So I pushed her round to the left. Still silence. I sat and waited. There came, in my earphones, a long over-patient sigh—and then a gentle voice: "You may call those turns, laddie, but, as far as I'm concerned, they're just changes of direction."

The machines we flew at E.F.T.S. were Tiger Moths, open cockpit biplanes of great stability and little speed. We grew to love them—they were such very forgiving aeroplanes. The one I flew mostly—old 84—was very much so—she forgave me many things—crooked loops, bad sideslips, flat turns, bump landings—so much, in fact, that when my flying got a bit better, and 84 had less to put up with, I felt like giving her a lump of sugar, or an extra ration of oil, or something, in return for past favours. Most of my fellow "Nits" went solo after about seven or eight hours dual. The ordinary flying syllabus included slow rolls;

stalled turns; rolls off the top of a loop; spinning at least once every two hours, and other gentle means of disturbing one's half-digested lunch—and also we had to do forced landing practices—cross-country flights, and one or two other indispensable exercises.

In our course only three pupils failed to make the grade, and this I might say, involved no shame on the people concerned at all. The R.A.F. is purely voluntary, and if pupils decide they don't like flying—or that they aren't good enough—then they're at full liberty to say so, and to turn to something else. One of our instructors put it rather well when talking to a pupil who'd just been suspended. This instructor—incidentally in civil life he was a well-known private owner and an M.P.—said: "There's nothing wrong in not being able to fly. What would seem wrong would be if everyone could."

Our ground work was, at least for me, pretty hard, especially the Morse. I managed to learn the code and get up to about six or seven words a minute, sending and receiving, on the buzzer. But, receiving signals on the Aldis lamp, foxed me completely, and, in the examination, I'm sorry to say, I failed on the lamp —the only one on the course to do so. I'm only just managing to cope with it now after another spell of work at my present place, but I fear I shall never grow to love it. We had quite a stiff examination on our ground subjects, including navigation, airmanship, rigging, engines and armament. I got through all right, I think, but I'm still waiting for a note from the examiners to tell me that the proper answer to "What would you do if your aircraft caught fire in the air?" is not "Dial 'o'."

And a last word about the instructors themselves. Someone recently published a bit of verse which summed up their lives. He wrote:

"What did you do in the war, daddy?
How did you help us to win?
Circuits and bumps and turns, laddie,
And how to get out of a spin."

And very true it is.

These men—experienced pilots all of them—are doing one of the R.A.F.'s greatest and most unpublicised jobs. Hours of circuits and bumps, correcting the same old faults, getting "Nits" off solo—and then seeing them go away—having their places taken by another bunch, who're going to do the same silly things in the same silly way all over again. Yet, on the whole, most of them say it isn't too bad, and that they become first-rate psychologists, which probably they do.

But the real joy of an instructor's life is his collection of stories of the things "Nits" have done. There is the instructor who, to give a titled and illustrious but rather nervous pupil some more confidence in landings, held his hands above his head as the plane was coming in, so that the pupil could see that he alone was doing the landing. The plane came down, bounced, came down, bounced again, and finally jolted to rest. The instructor looked angrily round, and there sat the pupil, hands held firmly above his head. "Well," he said, "you told me last time round to watch how you did things and then to do them your way, so I did."

I had collected a nice lot of stories which I wanted to put in this broadcast, but there's no time, so I'll end the E.F.T.S. chapter of my R.A.F. experience with another quotation from my instructor, which sums up life, from his point of view, for those first flying-training weeks of ours.

"Up round—down—bump. I've got her—you've got her—I've got her—(sigh)—I've got her."

It's been a week or so now since I left E.F.T.S. for a more advanced Flying Training School—where I'm now busy flying twin-engined machines, and preparing for another and stiffer examination. I'll try to let you know how I make out—and I hope it'll be all right—because it's the "wings" exam., and well, I *am* getting rather tired of wearing my greatcoat.

*December*, 1940

# ATTACK ON MANNHEIM

### BY A SQUADRON LEADER

*The speaker, a Squadron Leader in one of our heavy Bomber squadrons, describes a recent raid on Mannheim which has lately received a great deal of attention from the R.A.F. He holds the D.F.C., awarded for his work on the night of the attack on Munich.*

THE operation the other night against Mannheim was on a pretty big scale; aircraft from a number of squadrons were operating. The general idea was to send in the early ones with incendiaries so as to light up the target, then for the main force to come along with heavy stuff. The operations of the main force incidentally were spread over a period of six or seven hours.

The station commander had a word with the captains and crews before we left. He said he was expecting some very good results. He also mentioned that, as there would be a lot of aircraft concentrating on Mannheim, he wanted us to go in, bomb and come out again as quickly as possible.

We left at regular intervals. It was important to keep strictly to the scheduled take-off times because of working in with the other stations, so as to make the bombing a more or less non-stop affair once it started.

Just when we were due to get away it started raining cats and dogs. One could just see a few blurs of light indicating the flare-path and that was all—rather like driving a car in heavy rain without a windscreen wiper, only more so, if I may put it that way.

However, we all got off all right. The cloud base was at a thousand feet, and we had to climb up to get through it. We were climbing rather slowly, too, because we were carrying a heavy load. Once we got above the clouds, we were in bright moonlight and the navigator got his sextant out and started taking Astro sights to check up on our position. Normally, when you cross the Dutch coast you reckon to get a bit of flak thrown up at you but this time, being still above cloud, we got nothing at all.

We flew on, keeping straight and level. Then, fifty miles inside the Dutch coast, the cloud cleared and we saw the ground for the first time since we'd taken off.

Altogether, it was a very uneventful trip out. In Germany they'd had a fall of snow which was quite a help to navigation. When you have a light fall, as this was, the important things—woods and rivers, lakes and towns and villages—all stand out much clearer, and so, with the moon very bright, we pin-pointed ourselves quite easily as we went along.

We were some distance from Mannheim when the front-gunner reported heavy flak ahead. We were then about ten minutes away heading straight for it and we knew it must be Mannheim. The stuff was coming up in bursts and then dying away, then breaking up again, spasmodically.

I told the navigator to prepare for bombing and he came up into the bomb aimer's position in the nose of the aircraft with his map. Having done that, he had to check up on the bomb switches, select his bombs, and we determined the length of the stick. One can drop a widely spaced stick or a close one. This time I had decided on a very close one.

As we approached, I could see fires already well under way, and it was obvious that the blitz was in full swing. We picked up the Rhine, followed the river up and then started to take avoiding action because there was quite a lot of flak, mostly light stuff, coming up. It's all tracer, this light stuff and you can see strings of it coming up.

The flak seemed to be pretty continuous by now. When it gets like that, one just goes through it, doing evasive stuff. I don't think flak deters any of the fellows from carrying out the job. One sometimes sees German reports of the barrage turning our aircraft back. In my opinion, that's just nonsense. As we got a bit closer, the navigator called out "Ready", and I levelled out and opened the bomb doors. You only do that at the last minute because when they are open it makes the aircraft drag a bit, so you open the throttles a little to compensate the slight loss of speed.

You tell the navigator "Bomb doors open, master-switch on," and he repeats that back to you. He will probably make a few corrections to course—"left, left, right, right, steady," and so on—and when he's bombed he calls out "Bombs off".

As a matter of fact you can feel the bombs go. You get a slight lift in the aircraft and it immediately becomes much more lively. I must say, I always find it a bit of a relief directly they've gone and one knows that one's done the job one was sent out to do. Well, on this occasion everything went normally and as soon as the bomb aimer said "O.K., sir, bombs burst," I put the aircraft into a steep turn to let the crew have a look. There were three groups of huge red fires burning down below and spirals of heavy black smoke rising above the town. The fires were increasing in intensity all the time. Then, we set course for home, we could see other people bombing as we came away. I told my rear gunner, as I always do, to note the time when he could no longer see the fires, and we were about sixty miles away when he called out and said he'd lost them. Nothing very much happened on the way back. Coming down through the clouds over the North Sea we started to get iced up a bit. Pieces of ice were threshing off the air-screw and coming through the fabric of the fuselage, but we got back without any real trouble. Everybody had seen much the same sort of thing as we had—fires and still more fires—and the general feeling in the squadron was that the show had been a great success.

*December*, 1940

# RAID ON TARGET NEAR VENICE

## BY A FLIGHT LIEUTENANT

*The speaker is a twenty-three-year-old Flight Lieutenant in a heavy bomber squadron. He describes a recent flight from England to Italy to bomb a military target at Porto Marghera on the Italian mainland near Venice.*

THAT was the longest trip I had ever done. One knew it was going to be a pretty tiring business—ten hours or so there and back—on the other hand one was very pleased to be given the opportunity of doing something that was really new.

Once before the squadron had been briefed for Italy and we'd been disappointed by having the operation cancelled because of bad weather. This time everything looked absolutely perfect from the word 'go'.

It was just after six o'clock in the evening when we got off. The navigator pin-pointed himself on the coast, then we made a slight alteration of course and got our next pin-point on the other side, crossing the North Sea in comparative darkness because the moon hadn't risen yet.

I decided we were a little too low to cross the coast safely in case we hit a heavily-defended area, so we turned left along it to gain an extra fifteen hundred feet. While we were gaining height in that way a fighter passed very close to our tail, but he evidently didn't see us. At any rate, he didn't attack. The rear-gunner, of course, wanted to have a crack at him—all air gunners always do—but it had come and gone too quickly for him to get his sights on it.

We were taking as direct a route as possible to avoid passing over neutral territory. Seventy miles inland and ground became snow-covered. It was a fairly cold night—minus twenty degrees at twelve thousand and, later, at fifteen thousand, minus twenty-five.

We were climbing gradually all the time, until we'd reached a good height for crossing enemy territory. And we continued at that height. It was then just after nine o'clock. Half an hour before reaching the Alps we started to climb again and went up to fifteen thousand. If it hadn't been such a good night from a weather point of view I should certainly have gone higher than that to get across.

As it was, the winds were slight and there was no cloud, so there was no danger either of unpleasant bumps or icing conditions.

We came to the foothills of the Alps after about three and three-quarter hours' flying. It was a nice clear night with everything in our favour. A lot of people burble about the beauties of the scene. Well, personally I must say, I was rather more impressed by the fact that if anything went wrong there was little chance of coming down safely, except perhaps by parachute.

It was difficult to tell one peak from another. We were up at twelve or thirteen thousand feet.

I suppose it must have taken about an hour from the commencement of the foothills on one side until we were clear of the foothills on the other side. The moon was still not up and, having crossed the Alps, it wasn't at all easy to see any detail on the ground now that there was no snow to help us. In fact, it was so dark that we turned along the river, thinking for a moment that it was the coast. Eventually we came out some miles from Venice. The navigator recognized Venice from the form of its waterways and then we turned along the coast. Meanwhile the bomb-aimer was adjusting the various settings on the bomb-sight, such as, height, wind and air speed, and trail angle.

There was still no moon but a coast is always easy enough to follow on a clear night, however dark it is. We could see the outline of Venice very clearly defined as well as the famous lido and the bridge connecting Venice with the mainland.

The target was a petroleum works which lay on the mainland just west of the end of a bridge, near the docks. Its position was quite obvious as we knew exactly where it was and we could have bombed it without a flare, but I decided it was quite worth while dropping a flare and having a look at the place before we attacked it.

We ran up along the bridge, dropped the flare, did one circuit round it and then went out again and came in to make the bombing run from the same direction.

The navigator watched the bomb burst on the target area and we did another circuit and saw parts of the plant going up in flames as the incendiaries dropped. There was a train crossing the bridge at the time and the explosion must have been a bit of a shock to the unsuspecting Italian passengers.

Altogether, we were about twenty minutes over the target area. Then we turned for home, and as we approached the foothills of the Alps on the way back, the navigator who was in the astro hatch, said it looked as if the moon was sitting on top of a peak.

We climbed to fifteen thousand again to get over the high part. The Alps looked a little more friendly now. That may have been due to the moon, but probably the fact that we were on the homeward journey had something to do with it too. Frankly, we were none of us sorry to see the last of the mountains.

Just this side of the Alps we ran over cloud which blanketed out the ground. Then, having got clear of that, there was a lot of ground haze which made visibility very poor and again we were flying on dead reckoning navigation.

On the English side of the Channel there were ten-tenths cloud at four thousand feet and we were flying above it, in fact, we were not able to see the ground at all. I was pleasantly surprised when we got the "Over" signal—that's to say a signal from the ground, "You are over the aerodrome." However, my aircraft had behaved magnificently over the whole journey, and had taken us there and back in the very good time of nine and a half hours.

*December*, 1940

# STORY BY A CANADIAN SPITFIRE SQUADRON LEADER

*The author of the following account is a young fighter pilot of whom Canada may well be proud. To-day the leader of an R.A.F. Spitfire squadron, he had flying in his blood ever since he went to school in Winnipeg, Manitoba. He made his first flight when he was fourteen, and he learned to fly an aeroplane two years later. At seventeen, he was the youngest licensed flyer in the Dominion and when he got his commercial licence, two years later, he was the youngest commercial pilot. So he sailed for England in 1935 to join the R.A.F., and within a fortnight of his landing in Liverpool he was in the Royal Air Force. Before the war started he had been awarded the Air Force Cross for a particularly dangerous job of flying. Just recently he won the Distinguished Flying Cross, for gallantry in action as the leader of a Spitfire fighter squadron.*

Well, I've been lucky enough to see quite a lot of this war so far, and believe me, I hope I'm going to see a lot more of it before it's through. I want to see, for instance, another afternoon like that of September 27th, when the R.A.F. slapped down more than one hundred of Goering's Luftwaffe.

At the time I was a flight commander in the now famous Polish squadron, flying Hurricanes, and with several other squadrons we went up to meet the Germans. A terrific anti-aircraft barrage was being put up round London, and from where we were we could see the capital gradually become encircled by a ring of smoke puffs from the bursting shells. Then we saw the hordes of German bombers and escorting fighters coming in over Kent. As R.A.F. fighters got stuck into them, you could see them falling away, plunging down with smoke pouring from them. It almost seemed that there was an invisible barrier over a certain part of Kent and that as soon as the bombers reached it large numbers of them suddenly began pouring out smoke and going down. It was an amazing sight and if I hadn't seen it all happen, I would never have believed it.

All this was happening in the few minutes before we arrived. Our squadron, by the way, was accompanied at the time by a Canadian Fighter Squadron, so I felt quite at home as we went into battle. I got behind one bomber and went straight in at him. When I was about seventy-five yards from his tail, his rear gunner suddenly realized that I was there and opened fire. I fixed him with my first burst. Then I pressed the gun button again and kept my thumb on it for several seconds, and shortly afterwards he began to go down in flames. I watched him and saw him go into the sea with an almighty splash.

Another German bomber which crossed my sights got a quick burst from another pilot and as he went gliding down I saw a red glow appear under his belly, and as the glow got bigger, so his dive got steeper. He exploded before he hit the water, and it began raining little pieces of aeroplane from the spot where he had blown up.

There was a lot of milling around in the sky that afternoon, and when the Canadian squadron and ourselves got back we found that we had collected more than a dozen Huns between us. The day's score, as I said, was over the hundred mark. I got two bullets in my Hurricane that day, and they are the first bullet holes I have had in my aeroplane since the war started and I hope the last.

I want to tell you right now that it was a grand experience fighting with the Poles. When the squadron was first formed at the end of July the nucleus consisted of an English Squadron Leader and two flight commanders, of whom I was one. The Poles who came along had plenty of fighting experience. They had fought in Poland, and later in France, and when we got together in the early days of August we were all flat out to have a crack at the Huns. By the end of the month we had taken our place in the front line.

The first morning in the front line we were sent to escort a formation of our bombers; we ran into a raid and we got a Dornier 17 first crack. The next day we got six Messerschmitt 109 fighters, and from then on we slapped 'em down as they'd never been slapped before. In their first four weeks that Polish squadron shot down more than one hundred enemy aircraft, and in five weeks we had shot down more than one hundred and twenty.

You can take it from me that those Poles were magnificent fighters—and they still are. They introduced their own technique into air fighting. They sailed right into the enemy, holding their fire until the very last moment. That was how they saved ammunition and how they got so many enemies down on each sortie.

When I started talking, all sorts of incidents come crowding into my mind about this war. I was in France doing a special job in a Spitfire from May until June 16th. Just before the French collapse I remember flying over one part of the country in which there was not a single living thing. Not a head of cattle, not a dog, and certainly not a human being. And then I came upon the refugees and saw, for mile after mile, roads packed tight with people, fleeing before the Germans. At one stretch I should say there were forty miles of road packed solid with refugees.

There were tragic sights to be seen on the ground, too. In every hotel the people were lying about all over the place, just snatching a little sleep before moving on. I remember, particularly one old woman, with all her worldly belongings in an ancient perambulator. Yet she had a cage hanging by the side of the pram, and in the cage was her cat. They were pitiful sights, but the French were very brave. I got on very well with them, largely, I think, because I am a Canadian. Before, and even after the collapse, you only had to say you were a Canadian and there was nothing that the French would not do to help you.

Since I've been back in England I've had my share of excitement—and when it's been in the air it's always been most enjoyable. Some days ago, for example, we saw between sixty and eighty Me. 109s, and though there were only five of us Spitfires at the time, we had a height advantage of some 6,000 feet. We just nipped down on them. The one I got first began to belch black smoke and went streaking down, leaving a tremendous trail of smoke that stayed in the sky for at least ten minutes. Then I had a terrific dog-fight with another Messerschmitt which attacked me immediately afterwards. He could fly, too, could that Hun. He kept swinging up and round into the sun and several times I had to guess where he was as he disappeared with the sun right behind him. I squirted at him several times like that and finally saw him come out of his protecting sunshine with his tail nearly off.

The fin and rudder were in tatters. As we rushed towards one another I could plainly see the pilot looking straight at me. We missed each other by feet. As he turned to the left he made a target of himself, so I squirted him for a second. He flicked over on his back and with grey smoke simply pouring out, went straight down towards the Kentish soil. He went into the ground with an awful smack. There was a flash of flame, a cloud of smoke, and when I looked again there was nothing but a gaping hole with a few tiny pieces of scattered wreckage round the edges. I saw some British Tommies run across to the crater he had made and look down. Then they waved up at me and gave me the thumbs up sign.

Well, that's the kind of job we're doing and we get quite a kick out of it. Of course, you don't run into Huns every day of the week, but when you do go up to meet him you feel so good that you think you could take on the entire German Air Force single-handed. These Spitfires we're flying may account for some of that feeling—they're certainly good. Altogether now I've done about one hundred and fifty hours' operational flying in this war and I only hope there's going to be a lot more to come.

# RAID ON LORIENT

### BY A CZECH PILOT

It is just a few nights ago that I am making my first mission with the Royal Air Force against the enemy. I was for four years observer in the Czechoslovakian Air Force. I go to France and I am nine months in France in the French war. Then I come to England with a little ship from Bordeaux. It is a little merchant ship. Eight hundred tons. A little Dutch ship. I am in some camps here and then I go to a Czech depot. I do not speak any English when I arrive. I buy an English dictionary and when I have free time, I learn to speak it: but it is not so quickly. Then, since September, I am in the Czech bomber squadron with the R.A.F. I have a course of navigation which is most painstaking and in October I am ready, but I must wait for my pilot. He is not so ready. We are to fly Wellington bombers. It is very good, the Wellington.

So, I am waiting to go for some weeks, but my captain is not yet fully instructed. Then, when he is ready and we are to go, he becomes ill. He has influenza and after more waiting I go on this, my first mission, with another crew. Before this happens I have asked already to go with another crew until my pilot is finally prepared, but this is not possible, for all the other crews are complete and it is not good to chop and change crews. But now I can go. We are on this occasion to bomb the submarine base at Lorient. Our pilot is a sergeant and we have altogether three other sergeants and two officers. Before we go we are briefed most exactly by our own Czech wing commander. The wing-commander tells me that I must find exactly this target to bomb. He gives me the position of anti-aircraft guns and the position of submarines in these docks at Lorient. When we are going out the weather is good. It changes very quickly, the English weather: now good and then after two or three hours it is, perhaps, bad. This was good all the time except that when we come back we have some clouds—but that is not yet.

When I come to the French coast I am finding myself a little off my course. You see, I am to be here at a certain point, and I am four miles from this but I fix me by the coast and we go on. The aircraft goes very well indeed. Before we have come to Lorient we have seen a big fire: I think about twenty-five miles away. Also big anti-aircraft fire and searchlights—many of searchlights—and much of anti-aircraft fire. When I see all this I say, "That is Lorient where we are to go", but we are already going in this direction so it is not necessary to make an alteration. We go into the anti-aircraft fire and into the searchlights. They fire at us but the explosions are not of our height. The others with me have already made eight or nine missions with our squadron and have been under fire very often, but for me it is the first time. It looks very nice, I think, and illuminates the night very nicely.

We are flying into our target from the north. I go a little to east and turn also back to south. Before this, I have prepared my bomb-sight. Then I am looking and giving the directions for my pilot. I have seen the river and on the right side of the river I have seen here a big building which must be the smithery which is shown for me on my map. I have seen the river very good. It looks a little lighter than the ground and it is quite simple to see. Also I can see the docks. There is no cloud at Lorient: only little patches of mist, but we can see through them quite simply. When we get near we see again the fire that we have seen before, but now he was not so great: he is dying. Since I am to make the bomb-aiming I am lying on my stomach in the nose of the aircraft looking down on all this. I have, besides heavy bombs, many incendiaries. When I have the target in my bomb-sight I tell to the pilot "Straight on". He goes straight on and when I have got this target as I want it I press the switch. I can see the bombs go from the aircraft. Just for one moment. No more. The rear gunner says he has seen the explosions from the bombs. Then it is most remarkable what happens. There are between twenty and thirty big explosions and soon they are making altogether one big fire. There is much talking in the aircraft at all this and everybody asks the others to look at what is happening. The front gunner is pleased and cries away that it is the biggest fire he has seen in all the nine missions he has made. All this time, they are firing at us also heavily, but again it is a little down and not of our height and we are not hit.

It is very good because this fire had held on so well that when we go back from the target twenty minutes the rear gunner is finding it still possible to see the fire. When we are going back, there is more fire at us for one or two minutes, but still we are not hit and we come home without difficulty. When we are home once again the wing commander is very pleased with what we have done and tells us that this was a very good show.

*January*, 1941

# RAID ON BREMEN

## BY A SERGEANT PILOT

As YOU already know the R.A.F. last week bombed military objectives in Bremen on three successive nights. I was on two of the three raids. I will describe my second one because its more vividly in my mind; in fact, I've never seen anything like it before. When we left there were so many fires in Bremen that I gave up counting them.

We set off soon after tea-time: actually, I remember it was five-forty-six when we got on to the flarepath. The weather was very bad. We circled the aerodrome to get a bit of height: then almost immediately we had to climb through thick cloud, so that for the first half hour we were flying blind. Ice was forming on the windscreen and it looked as though we were going to have a bit of trouble so I started using my de-icers. But we came out of these bad conditions at seven thousand feet and above that it was beautiful weather—lovely and clear—with a quarter moon and plenty of stars. The only snag was that it was appallingly cold. In the ordinary way, I usually fly the aircraft out and fly it while we are doing the bombing: then when we've got clear of the target area, I hand over to the second pilot as far, say, as the North Sea: then I take over again. But this time it was so cold that we changed over several times both going out and coming back in order to try and get warm by moving about a bit. It'll give you some idea of what it was like, perhaps, when I tell you that once when I had some tea out of the thermos flask to try and warm myself up a little, there was ice at least an eighth of an inch thick round the rim of the cup when I'd finished drinking.

But, apart from the cold, conditions were perfect. We got a bit of flak going over the Dutch coast but it wasn't really worth bothering about and I just carried on straight and level. So far as possible, I always try to keep a constant air speed going out and avoid jinking as much as possible—that's to say dodging about to avoid enemy fire—otherwise it only makes things more difficult for the navigator.

Having got over this bit of flak quite safely we flew on steadily towards our target and without incident. When we were still about sixty miles away we could see a red glow in the sky, and thirty or forty miles off we could actually see flames rising above Bremen.

We went in about five miles south of the target. I cut the engines as much as I could to avoid being picked up by the enemy, and of course, I was jinking now, all right.

Then I did a very gentle left-hand circuit and I thought I'd try and count the fires as we were going round. I got up to thirty and then gave up. There must still have been at least another twenty or so in the target area.

Some of the fires were very long in shape as though factories or other large long buildings were on fire. In one place there was a tremendous fire three or four hundred yards long. A deep red glow was reflected in the river and the fires were so numerous and so bright that they lit up the whole town, and my navigator was able to make his run up guided by the bridges across the river. As we were circling I saw three sticks of bombs go down.

Then, just as we were starting our run up, the flak became rather more heavy ahead of us and I saw another bomber running up, right across our track, but about a thousand feet above us and roughly half a mile ahead. This other plane was held in a large cone of searchlights: there must have been twenty-five or thirty lights on him. I could see his bombs leave the aircraft, and I was able to follow them for about five hundred feet as they fell. I didn't see them burst, though, because I was too intent on our own run up, but out of the corner of my eye I could see this other machine trying to get out of the searchlights: just wriggling one way and another. It was an amazing sight. Finally, the pilot did a stall turn and dived out of the lights. It was very good to see him get out of them so neatly.

Then we did our bombing, mostly with incendiaries. I did another circuit to see what results we'd got, and I saw additional fires starting and several heavy explosions where our bombs had fallen.

Altogether we were there about twenty minutes, during which time I'd seen four people bomb beside myself: that's to say a stick of bombs every four minutes. By this time the A.A. people had got our height fairly accurately and we had one or two bursts very near which rocked the plane, but we got out of it all right and started for home.

When we were about ten miles away I turned to give the crew a look back at Bremen. The whole place seemed ablaze. Then again when we were about a hundred miles away I turned again and even from that distance I could still pick out a red glow in the sky from the direction of Bremen. I've been on fifteen raids, including Dusseldorf and Mannhein and Berlin, but I must say I have never seen anything like this one before.

*January*, 1941

# TALK BY THE C.O. OF AN AUXILIARY FIGHTER SQUADRON

*The Squadron Leader Commanding No. 602 (City of Glasgow) Auxiliary Squadron, who is the author of the following account, has been with the squadron since the war. He was on patrol with it when it helped to bring down the first enemy bomber to be destroyed over England and he went south with the squadron when it moved to help in the defence of London as the "Blitz" began. Now the score of the squadron is eighty-nine enemy aircraft known to have been definitely destroyed and twenty-five more probably destroyed.*

After four months' fighting in the South of England my squadron has just come out of the front line, as it were, to an aerodrome in a quieter part of the country up north. And it is good to be able to relax a bit.

We have had our casualties in those four months, six pilots in the squadron were lost. But not one was actually killed in the air by the enemy. During this time scarcely a day passed without a combat. On many days we were sent up half a dozen times to fight battles, often against large formations of the enemy. In the circumstances we consider our losses were astonishingly light. On the other hand our "bag" of enemy aircraft was eighty-nine destroyed and confirmed, many probables and damaged. So the Germans paid a stiff price for our losses, and each new successful engagement gave us fresh heart for more.

My unit is the City of Glasgow Squadron, one of several Auxiliary Squadrons which have been fighting in the south, and it might interest you to know how we come to be in this war, and what our experiences have been. The story perhaps will answer for similar squadrons from other parts of the country.

I joined the squadron six years ago, shortly after leaving school, and began my flying career with them. The squadron had already been in existence for nine years, and for four years after my entry continued to engage in bomber training. Then, to the delight of every member, we became single-seater fighters. At once we got down to some really serious training. We had our civil occupations to attend to, but every week-end and several evenings a week we put in learning all we could about fighter tactics. It was just as well we did, for six months after this development the war broke out. Within six weeks of hostilities, the squadron was engaged in the first Fighter Command action of the war—the raid on the Firth of Forth on October 16, 1939. In that action the squadron helped to shoot down the first enemy aircraft to be lost in the present war over British soil. I had nothing to do with it personally. In fact, I distinguished myself by being about the only person in the squadron who did not fire his guns at something Teutonic that day. Truth is, I never saw any German aircraft in the air while I was up. My record up till early this summer consisted of having seen two German aircraft in the air when I was on the ground, and two on the ground when I was in the air. But not one sausage did I see in the air while I was flying.

One night in June, however, when I was on patrol, a Heinkel came my way—caught in the beams of several searchlights. This turned out to be my first victim.

When the target aircraft is brightly illuminated, as this one was, it becomes fairly easy to shoot it down, as you have the advantage of seeing without being seen. The one difficulty I did find was to be able to gauge the height of the target, since there is no background to it. It looks like something sitting stationary in mid-air, when, in fact, it is travelling at 200 m.p.h. or thereabouts.

After my début, as one might call this combat, the squadron had several encounters with reconnaissance aircraft, mostly in ones and twos, over the North Sea. But it was not until my squadron moved south, sometime after I had been given command of it, that we encountered the real "Blitz".

Soon after this, on one particular patrol, we were told to intercept a raid of about one hundred enemy aircraft which were coming in from the south. We were informed that their height was about 8,000 to 10,000 feet and that just about that height there was a heavy layer of cloud. Consequently we split into two flights. One flight, which I was leading, went above the clouds. The other remained below to make sure we did not miss the raid by being on the wrong side of the cloud layer.

As you can well understand it is not possible for a pilot when flying an aircraft to hear any outside noises, and one has to rely entirely on seeing one's quarry. As it happened, on this occasion, we did hear something of our prey. The enemy were using a wireless frequency which must have been very nearly the same as our own, for presently we began to hear them chattering away to each other like a lot of monkeys in a box. Up to this time we had seen nothing of our quarry, and as we approached them the chatter grew louder and louder. Then, suddenly, we spotted them. They were straggled out in large "vicks" of about eighteen aircraft in each, just above the clouds. As we were only six in number, against their one hundred or so, we saw them a long time before they saw us—which, of course, gave us a big initial advantage. We were able to climb above them and get out in front of their leading formation. As we approached nearer, the Huns suddenly spotted us and, above all their chatter, a somewhat agonized voice came through as clear as daylight—"*Achtung. Achtung! Schpeetfiren!!*"

At that, an amazing transformation took place—and the straggling formation closed up into a formidable mass, the Me. 110s wheeling out from the front to form a protective circle round the bombers.

Thanks to the advantage we had in position, three of us were able to dive head-on into the leading formation, whilst the other three stayed behind to play with the fighters. The leading formation of bombers broke up after our attack, and in ones and twos they sought refuge either in or below the clouds. Those who were stupid enough to go below the layer of cloud were pounced on by our other flight which was still waiting for them. Theirs was a sort of vulture's job, and like vultures they did it. And then we all returned safely.

Which reminds me. A very great friend of mine, who was one of the best fighter pilots in the country—but who unhappily was killed in action recently—once said to me: "You know, Napoleon used to say 'Don't give me clever men—give me lucky ones'." Well, there seems to be a good sprinkling of lucky ones in the R.A.F.

Touch wood, I've been pretty lucky myself. I've forgotten how many combats I've fought. But, with a score of eight, confirmed, as a result of my fighting, I've never once been hit. Nor has my aircraft. Even more remarkable, another member of my squadron, with a score of twelve enemy aircraft to his credit, all confirmed, has never once been hit either. There was a dent on his tailplane one day, but it appears that the mark was caused by a stone.

The best "bag" the squadron had in one single action was on a day in August when we were detailed to intercept a raid coming in over Dorset. Once again we had the advantage of height, and this time of the sun also, and arranged to knock down twelve of the enemy, with a loss to ourselves of only two aircraft—the pilots of both of them safe. The enemy were very strong in numbers, but they split up and fled back to France.

One of the two pilots of my squadron who baled out, landed in a farmyard where he was promptly cornered by a lot of irate farmers armed with pitchforks. That reception, the pilot said, was much more frightening than the baling out. Actually, on that day, so many people were floating down by parachute at the same time—mostly Germans I'm glad to say—that it must have looked rather like an invasion army being landed.

While on the subject of coming down by parachute a rather amusing incident occurred on another occasion. A very fat man baled out of a Dornier which the squadron had intercepted at about 25,000 feet. Needless to say everyone thought it was our old friend Goering doing another of his celebrated reconnaissance trips over this country! We circled around him while he was coming down—and it was ludicrous to see this enormously fat man dangling at the end of his parachute harness with his two podgy arms stretched above his head.

His landing was even more ludicrous. He touched down on the roof of an outhouse in a garden in Kent, went crashing through the roof, and remained there with only his head sticking through. The last we saw of him was his parachute descending slowly on top of him, obscuring the whole picture.

Finally, I would like to take this opportunity of saying a word about the ground crews. It is usually the pilots who get the praise and the thanks. But the job we do is little in comparison with the excellent and unremitting work done by the fellows who keep us in the air. They work for us day and night and I never hear a grumble from any of them. They are just grand, and if any of them are listening in just now I would like to say, speaking, I am sure, for all pilots, "We take off our hats to them."

*January*, 1941

# A STATION COMMANDER LOOKS BACK

### BY A GROUP CAPTAIN OF FIGHTER COMMAND

I HAVE been asked to tell you something of what goes on at a Fighter Station. I'll try to do this by "looking back" over the War in so far as my station was concerned. We all knew, of course, it was going to be an Air War, and you can imagine, therefore, our intense excitement when war was actually declared. But how different those first seven or eight months turned out to be. There was no immediate "blitz", and my pilots spent their time incessantly chasing the odd elusive Hun far out over the North Sea, with only here and there a success. I remember —in those early days, the shrieks of almost childish joy with which the very sight of an enemy aeroplane was hailed by our boys in the air, and the tears of anguish when one got away by diving into clouds after a long chase, far out over the North Sea.

Little did we know then that the Hun was progressively to switch the whole weight of his Air Force—on to a single objective . . . and *our* turn was not yet. Little did we know *then* of the intensive air fighting that was so soon to come.

And then came a red-letter day. May 16th, saw the first Spitfire Squadron leave my station to make an offensive sweep over the Continent. Two hours later the squadron returned, having patrolled as far north as Ostend. The enemy had not been engaged, but throughout the whole station there was a feeling of satisfaction and anticipation—that at *last* things were beginning to move; and a few days later, on a similar patrol, a Junkers 88 was shot down in a smother of sand near Flushing. . . . I remember the high excited voice, the breathless excitement of the youngster as he "hared" home to report in person. His little dance of joy on the aerodrome as I met him—bright-eyed—indescribably happy.

Less than a week later was to see the great Battle of Dunkirk, and the evacuation of our Army in the face of the whole might of the German Air Force. How can I *begin* to describe those momentous days? What a target those beaches were—right on his own door-step . . . crowded with the flower of the British Army—and the sea between these shores and the Dunkirk jetty—stiff with troops in every conceivable kind of boat, barge, tug and paddle-steamer—until the way home looked for all the world, as one of my pilots described it to me, "like Piccadilly in the rush-hour".

What a task—our fighter squadrons had to keep the bombers away from those beaches—from the ships loading up—from the long procession home.

I wish I could give you the picture as I saw it. How heroically they fought—from the dark of four in the morning to the dark of eleven at night out and back, out and back, facing the whole might of the German Air Force—protecting a target such as the Hun must have dreamed about.

For eleven days, hour after hour, my squadrons fought him away from those beaches, and from dropping his bombs . . . fought him—heavily outnumbered. Load after load of bombs were jettisoned harmlessly in the sea as our Fighters went into the attack, and many a bomber fell with them—whilst the unarmoured Messerschmitt fighter of those days were "easy meat"—and the "bags" obtained were terrific. On one day alone my station destroyed thirty-one enemy aircraft, and during those eleven days my squadron alone destroyed one hundred and twenty, and a further seventy-five so badly damaged that they probably never reached their home bases. Nice work that, when one remembers that we were fighting with every tactical disadvantage, fighting over enemy territory, and against odds of often seven and even ten to one, and yet our losses were less then one-tenth of the confirmed casualties inflicted on the enemy.

But what a strain it was—a strain that could be seen in the faces of my boys, as towards the end of those eleven days, they went into action dizzy with fatigue—but well knowing in their young hearts how much depended upon them.

But they came out of it—as they went into it, with a light heart and a smile—and there was never a day so grim that my pilots failed to make it less grim, by their spontaneous humour—often spoken to themselves in the air. . . . What a joy it was to me, directing their efforts in my Operations Room, to hear—in the middle of a dog-fight—the radio silence broken with a "Oh! Boy, look at that so-and-so going down", or the solicitude for each other: "Look out, George, there's a 109 on your tail," and the calm, unhurried: "O.K. Pal," of the reply. Perhaps the following incident may give you some idea of the spirit in which our pilots sailed into the enemy.

One of my Squadron Leaders had been shot down on Calais aerodrome, which was expected to fall at any moment into the hands of the Hun. It seemed just possible, if there was no delay, to pick him up before he was captured, and so I sent out the only two-seater I had, an unarmed and vividly painted Training machine. I sent a couple of Spitfires also to escort it there and back. It landed all right at Calais, and as there was a lot of cloud overhead one of the Spitfires stayed above, whilst the other remained below.

The Spitfires were in radio touch with me, and in a few minutes, this is what I heard: "Hey, Al, there's a whole horde of 109s arriving", and the reply from the Spitfire below, "O.K., Johnnie, keep 'em busy, I'll be up in a minute". But the 109s, nine of them, dived past the "above-guard" and on to the tail of the Training machine, which had just taken off with the missing squadron-leader on board.

The pilot of the Trainer "hoicked" about all over the sky in a frantic effort to shake the enemy off his tail. By this time though, our two Spitfires had got amongst the 109s and proceeded to shoot down three in flames; several more were probably destroyed but were not actually seen to crash.

The Trainer meanwhile had nipped back on to the aerodrome again, the occupants taking cover in a ditch. The surviving 109s made off, leaving our two boys in complete possession; but with no ammunition and little petrol left, they could but join up, wave good-bye, and set course for home.

Over the Channel, homeward bound, suddenly I heard this bit of chat: "Hey, Johnnie, your machine is full of holes", and the reply, "O.K., keep going, I'll have a look at you". There was a pause, and then: "You're just as bad yourself", and the reply, "I don't give a so and so—I'm going to do a slow roll. Boy, am I happy?"

The unarmed Trainer took off from Calais later, an hour before it might have been captured by the Hun, and, unescorted, hedge-hopped its way safely home.

And, so with the 4th June, the Dunkirk days were over. What a difference the complete collapse of France which followed meant to us. Now we were faced with the enemy a few miles across the water, and rapidly occupying aerodromes all along the French and Belgian coasts. From these bases—from June to the beginning of August—he concentrated his attacks on our shipping. Often my squadrons were engaging odds of anything up to ten to one, and rarely less than five to one, but in six weeks, fighters from my station added a further one hundred and thirty-five enemy aircraft destroyed, together with another sixty probables to their "bag".

I remember during this period that one of our squadrons, which was in four engagements on one day, destroyed twenty enemy aircraft, for a loss of only two of their own pilots. One pilot "wrote-off" five Huns all in a row on the same day. Another two lads between them got six 109s and shot up a German E-boat in the Channel for good measure.

And then suddenly in mid-August, the Hun switched his offensive against our shipping, and for about a month launched a bitter and relentless attack against our fighter aerodromes, admitting by this change of tactics, that our fighters were getting the upper hand of him, and that his only hope was to smash them and break their morale.

By sheer weight of numbers he hoped to do this, and to blot out the "hornet's nests", which alone stood between him and the daylight annihilation of London. Hundreds of bombers, supported by high flying fighters, came over day after day—but more and more of the all-important bombers fell to my squadrons, and still we stayed on top. Steadily we took our toll, until in the end even the Hun couldn't take any more. During this short period we added another one hundred and twenty-five destroyed and from the air the Thames Estuary and Kent could be seen strewn with his wreckage.

I hope I'm not giving you the impression that all this was "just too easy"—it wasn't . . . here and there, we had to "take a bit" ourselves. I well remember the days when his bombers got through . . . and fairly blew blazes out of my station—on one occasion twice in one day, until the whole place was rocking. I remember thinking after each attack how incredible it was that so many bombs could fall all together—produce such an inferno of noise—blot out the station and aerodrome with their black and yellow smoke, in so short a space of time . . . and yet, when the smoke cleared, do so little real damage. But then, we were always a lucky station. I remember every man and woman "turning to" and filling in the hundreds of craters, rushing round in circles organizing the labour—"rounding up" steam-rollers from near and far. I remember also the fabulous bills that came in to me afterwards for free beer which I had promised . . . but it was well worth it—we were never out of action for a single day.

And then, about the 7th September, the Hun ceased his attacks on our fighter aerodromes. From then on throughout September he threw the whole weight of his attacking forces against London. Over came the same large formations in broad daylight, but now, with a single objective—London.

What a party that was! and what a beating was administered to his Luftwaffe! Do you remember such days as the 11th, 15th and 27th of September, when our fighter squadrons shot down well over three hundred enemy aircraft on those three days? And *that* total does not include those who managed to limp home with a packet of trouble on board, or failed and fell in the sea.

When October broke the Hun had had enough of daylight raiding, and from then onwards took to the night bombing of

London and elsewhere; contenting himself by day with swarming over Kent with enormous numbers of his high flying fighters—some of which carried bombs. These "tip-and-run" raids, mostly at 30,000 feet and over, were designed to wear out our pilots and were more difficult to deal with. These two months were, comparatively speaking, bad ones for my station, but somehow we managed to chalk up another eighty-two destroyed and thirty probables. This "falling off" in our batting average was relieved, however, by one or two amusing features. The *Eyeties* showed themselves. One day they ventured too near the Thames Estuary, and I swung one of my squadrons on to them. I asked the squadron leader afterwards why there was such complete radio silence once he had sighted the enemy. His reply was: "Well, sir, when I saw who they were, I was quite speechless with surprise—and before you could say Jack Robinson we'd got seven of them."

This same squadron a few days later was on patrol in the Maidstone area when the Naval Authorities at Dover rang up and said that there was a solitary German bomber "inconveniencing" our shipping in the Thames Estuary.

"Could we deal with it?" they asked. We said we would be delighted to, and as there was nothing else *German* about, the whole squadron was sent to intercept him—and a "free for all" followed as he raced for home. But he was too late, and was shot down in the sea.

I heard about his fate by radio from the squadron leader, and rang up Dover to inform them that we had disposed of their "inconvenient" bomber—a Dornier 17.

I asked that a boat should be sent out to pick up the crew—before the Germans, themselves, rescued them to fly again. "All right," came the reply, "but is this the Hun I phoned you about a few minutes ago?"

On my replying "Yes," he rang off with a—"What service!"

And so I come to the end of my story, and as I look back what a glorious fifteen months these have been. Little did I dream when I took over my station, of the history that would be made there. Eight hundred enemy aircraft accounted for—

five hundred and twenty odd destroyed, and nearly three hundred probables.

As I look back—what memories come crowding in, and of this cherished store—what are the things I like most to remember?

First of all I like to remember with a grateful heart, what a privilege it has been to serve and live amongst the people of my station. Of the happy spirit that permeates my station—and all those unsung airmen and airwomen who have worked so unceasingly—so uncomplainingly, day and night to keep the air-screws turning. Their loyalty and confidence in me, which has made my work such a joy.

I like to remember, and if I may, to thank all those kind people who, anonymously, have sent cigarettes, sweets and other comforts for my pilots and my people. So many came from the East-end of London—surely no better tribute to my pilots.

Of them, I like to remember, their simple modesty, and the way they could always raise a laugh, as, over their half cans of beer at the end of each interminable day's fighting in the summer—they swopped experiences—tired to death but unconquerable of spirit.

Do you remember those understanding, inspiring, and surely immortal words of Mr. Winston Churchill: "Never in the field of human conflict was so much owed by so many to so few." *I* do, for I have *seen* the valour of their ways.

*January*, 1941

# RAID ON ITALY

### BY A WING COMMANDER C.O. OF A HEAVY BOMBER SQUADRON

AT two-thirty on the afternoon before this raid which I am going to describe, the squadron was called together. I called out the names of the pilots and this is briefly what I told them: "We are on Italy to-night. The primary target is the oil refinery and storage tank at Porto Marghera, Venice. This is one of the most important targets in Italy and it is our job to blot it out. The distance is about seven hundred miles each way allowing for no strays, and as you know, it means crossing the Alps at 17,000 feet. The vital part of the target—the refinery itself, is comparatively small and is situated on a small peninsula. The amount of petrol you will carry will be enough to get you there and back with a good margin in hand, but watch your petrol consumption carefully. On your return there is likely to be fog at base and you may have to be diverted to aerodromes rather further away. You will be returning at dawn.

"Take all these things into account and decide for yourselves how low you can allow to come down to bomb over the other side of the Alps, remembering the lower you go the higher you've got to climb to get back over them on your return, with resultant higher petrol consumption. I want to stress that the target is a vital one and it is going to be a terrible waste of effort if we fly all that distance and then don't make absolutely certain of getting it."

That, as I said, is briefly what I told my squadron at two-thirty that afternoon. The short account of the trip that I'm now going to give you is told merely as one of the pilots who took part in the raid and something very like it might equally well have been given by anyone of the others. At nine o'clock I was sitting in my aircraft warming up the engine when an order was received to shut off engines and stand by for further instructions. I thought: "Well, that's as far as we shall go on this trip. Here am I all dressed up like a Christmas tree and nowhere to go." But about fifteen minutes later, the order came through that we were to go, so we started the engines again and eventually took off. Conditions then were rather bad. We got on to our course and climbed steadily until we got above the clouds over the English Channel. We saw no ground at all until we crossed the Rhine Valley. Here the clouds had cleared and with an almost full moon and snow on the ground it was as bright as day and we could see the peaks of the Alps many miles ahead of us. We began to climb—using oxygen now of course—until we reached 17,000 feet where the rarefied air was so clear that one could almost see from one end to the other of the Alpine range. It was a rather awe-inspiring sight with the valleys all filled with fog and those great jagged snow-covered peaks sticking out; like a popular conception perhaps of Antarctica, made more realistic by the intense cold.

As we came over the Alps the fog seemed to stretch away into the Lombardy plains and I began to wonder whether our flight was going to be a fruitless one. However, the fog gradually gave way to haze, and the haze, as we went on, gave way to glorious visibility. I was losing height all this time until we were 6,000 feet, at which height we picked up the Adriatic, and there was Venice on our right with the Lido stretching away beyond it. It was the most perfect night imaginable and I must say that, as a night-bomber pilot, accustomed to the cover of darkness, I felt terribly naked but not ashamed, and sailed sedately along in almost daylight conditions in our monster aircraft.

We flew round the area for five or ten minutes and then I decided that a low-level attack was indicated. We came down almost to ground level to the north-east of the target and flew towards it, passing just to the side of a largish fort where two sentries fired at us with rifles. On the way down I had given orders to my two gunners that they were to open fire on anyone who opened fire on us. I only hope those two sentries went to ground very quickly. We flew straight over the centre of Mestre

—the town which lies at the far end of the causeway leading to Venice and next to Porto Marghera. We were flying just above the rooftops. The streets were empty save for a few people. We heaved the aircraft up over a line of factory chimneys and there was the target in front of us. I climbed rapidly to 700 feet; the bomb aimer selected the biggest bomb we had, a really huge one, and let it go at the right place. The result was terrific. The aircraft was thrown bodily upwards and I thought we had got a direct hit from a shell. I enquired quickly whether there was any of the aircraft left and an excited reply from the rear gunner told me that it was our bomb going off. He said it had gone off immediately beside the large pumping station which we had been aiming for and that a colossal belt of smoke and flame had come up to more than half the height of the aircraft and there was a tremendous blaze.

The whole of this time tracer from the ground defences was whizzing past us in all directions. Looking back, it seems amazing that we weren't hit, but there wasn't a single bullet-hole in the aircraft when it was examined the following day. Both gunners were busy the whole time replying to this fire from the ground and, I hope, giving better than we got. We came round a second time to drop the remainder of our load. The bombs fell on or beside the fires started by the first bomb: there were more violent explosions and the fire was increased by half again.

We came straight down nearly to ground level again, and picked up the railway leading to Padua, which is about twenty miles away, where I knew there was an aerodrome. We flew alongside three goods trains, all the drivers of which leaned out to look at us in the brilliant moonlight. One waved, another spat, and the third, I thought, looked anxious. We did not fire at them.

Padua appeared. We whistled in and out of the tall spires which seemed to abound there, threw out leaflets then went on to the aerodrome. We swept the hangars and barracks with machine-gun fire. It must have been an extraordinary sight to see our great black bomber only twenty feet off the ground, clearly visible against the moon and snow, roaring and bucketing across the aerodrome at about 200 miles an hour with twin streams of gunfire pouring from nose and tail. The aerodrome defences were ready for us and opened fire with everything they had. I kept as low as I dared, making use of every bit of available tree cover. The tracer hopped along beside us parallel to the ground, but again we were not hit.

And that was the end of the fun. We climbed up steeply to cross the Alps again. Fog and cloud were by now widespread and apart from the mountain range, little was seen of the ground until we crossed the Belgian coast. Dawn was just breaking when we landed in mist at our own aerodrome.

The remainder of the squadron returned at intervals within the next hour. My tale is merely the tale of them all. They had all bombed from a low level. They had all scored direct hits. They had not wasted a single bomb. The long flight had been worth while. Only one aircraft failed to return.

*January*, 1941

# RAID ON HAMBURG

### BY A CZECH BOMBER PILOT

Up to this present time I am already on operations eight times against the enemy and now I am looking forward to many more missions. I am altogether nine years a pilot. When the Germans enter Czechoslovakia I escape to Poland. I am fifteen days only in Poland and then I come to England and here I am told that I should proceed to France with a group of twenty-five Czech airmen. I am wanting there to join the French Air Force, but there are difficulties. So instead I make application to join the Foreign Legion. All this group of twenty-five join also in accordance with advice from the Czech authorities in Paris and we go to Africa. At first we are employed as workers building highways. This was very difficult in the climate which is quite unusual for us. Then, after one time, we start with normal French drill infantry so that when these six months are over we can be regarded as French Légionnaires. During this time, however, the Czech authorities in Paris have made the necessary steps for us to join the French Air Force, and when at last they have succeeded in this all these Czech airmen in the Foreign Legion are sent to different stations in Morocco.

I spend another two months as pilot in the French Air Force in Africa; then I am sent to France and then when France collapses I am coming to England. That is in August.

When I am here it is not necessary for me to make personal application to join the R.A.F., because everything has been arranged for us beforehand and so, after a little time, I join the Czech bomber squadron. In these eight missions which I have made with them I am sent to eight different places, Berlin, Bremen, Hamburg, Wilhelmshaven, Essen, all in Germany and to these French Channel ports of Dunkirk, Calais and Le Havre. Three times I go as second pilot and then I am promoted captain of aircraft.

The raid at Hamburg is my most successful, I think. This raid was made on a full moon night. We succeeded in making an approach almost unobserved with complete silence on the part of the German guns on the ground, but so soon as we drop our flare, then immediately this anti-aircraft defence starts most violently and there are many searchlight also. I will never forget these thirty minutes which we spend over Hamburg simply trying to find the target in the docks. All the time they are firing at us very much. Then mine observer tells me "O.K. Now I am bombing." He tells me it is very good, his bombing. I see a big fire start and then I hurry for England.

At my first bombing missions I have felt some excitement, but now I am quite accustomed to it and I do not feel any excitement at all.

Upon one occasion when I am second pilot we have to jump from our aircraft by parachute. To start with it was a very good flight this. We get to Bremen and we drop our bombs. Again these bombs are dropped at full moon and I am quite sure they are dropped on the docks. There is much anti-aircraft there also, but again we are not hit. In all these eight missions my aircraft is not hit.

This time when we start to cross the Channel we are proceeding in cloud towards England and ice is starting to form on our aircraft. Because of these icing conditions our wireless set simply stops to work, so when we reach the shores of England we are without any guide at all. It is cloudy, windy weather, with complete darkness and we are about half an hour after midnight. It is so bad that at first we cannot recognise whether we are above the sea or above the land, though we have come down to less than five hundred feet. In the end we see the waves and the white foam and this enables us to recognise the shores. We are hoping that the wireless operator will succeed in repairing this deficiency in his apparatus, but it is not so. We remain in the air as long as fuel enables us to and then when we are still finding nowhere to land the captain is obliged to give this order to abandon aircraft.

I am to go first. I shake hands with all of them and I go through the front hatch. We are now at two thousand feet. I make two somersaults and then I pull the rip-cord. I am wondering very much if this parachute is going to open. I have never jumped before. Then I have a feeling of the parachute coming out of its cover which is on my back and next there is a jerk when she opens and I start to swing in the air like a pendulum.

It is raining very heavily and I am becoming soaked. As I descend, I notice a road. I shout, but apparently nobody is present. During this final period of descent I am prepared to land with my hands or my feet first, but unfortunately I first hit the ground with my face. I receive such a shock that it compels me to lie for some minutes to recover. Then I find I am in a meadow. I shout several times, but with no results so I fold my parachute over my arm and walk until I reach a house. When I knock on the door and shout again, there is a lady whose head appears from a window upstairs and I ask for help. This lady immediately vanishes and at once a gentleman appears in the same window with a gun which he points at me. When I see this gun, I am so weak already through all these events that I faint and next I find myself already in the house in an easy chair. When they have made sure of me they are very, very kind and they give me hot tea with whisky in it. The police and a doctor arrives with his car and he takes me to his house. He offers me a bath and pyjamas and a bedroom and something to eat and then I go to sleep. I am sleeping only for thirty minutes when the front-gunner arrives also. He explains that he had to hang for one hour from a tree with his parachute before succeeding to release himself and dropping to the ground.

And soon after this incident we are back once more on operations.

So now good night.

*January*, 1941

# RAID ON WILHELMSHAVEN

### BY A FLIGHT LIEUTENANT

*The speaker has been in the R.A.F. for fourteen years. He is thirty and has done one thousand and nine hundred hours' flying. Since the war began he has been on twenty-seven operational flights, including five over Berlin and one over Turin. On the night of January 16th, he was the captain of a heavy bomber which took part in the concentrated attack on Wilhelmshaven.*

THIS Wilhelmshaven raid was my first flight on coming back from leave, and I was rather glad to have it because the previous night Jerry had been over and kept my wife and me awake with a few bombs not many yards away from home. I thought it was nice to be able to return his visit so quickly. Over the North Sea we ran into thick cloud with a base at three thousand feet. I took the machine up to eleven thousand five hundred feet and avoided it, just skimming along the top. But that brought us into nastier stuff, electrical disturbances and, what was worse, icing. Blue flames were flickering round the airscrews and the guns. The aircraft was bumping about and it was hopeless trying to use our wireless. It was terribly cold—about minus twenty-nine degrees. At 12,000 feet we got clear of the cloud, except for one great whopper which we had to dodge. Forty miles from our target flak began to stream up from Emden; actually the ground defences were firing at another of our aircraft, and we skirted neatly round the barrage and sailed on to our target area. Once there we saw the thick black shapes of buildings standing out clearly against the snow. Some of our boys had already been over and had started five jolly good fires. There was one huge blaze which we reckoned to be about half a mile long and another big circular fire out of which ten explosions came just as I was running over my target. There was no need to bother about dropping any flares; the fires gave us ample light.

I decided not to bomb the biggest fire which was doing very well for itself, so I just waited my time. Then I saw heavy flak being fired at someone on my right. It gave me my chance. While Jerry's attention was distracted we snooped in unobserved. In a straight run we dropped one long stick, and that brought the anti-aircraft fire on to us, but by turning round I was able to avoid most of it and swung away to have a good look at the damage down below. Our bombs had set ablaze a large area and we saw nine or ten explosions all of which were quite distinct from the bursts of our own bombs. We toured around for another five minutes though all the time the flak was getting heavier. The extra five minutes were worth while for at the end of them one of the fires we had started was running into another and the dark shadows thrown by the buildings on to the snow were being driven away by the light of the flames.

There were many other aircraft over Wilhelmshaven and we saw bombs from some of them bursting squarely on decks and dock buildings. Chunks of debris went hundreds of feet into the air, and the job done we turned for home.

It was very quiet going home until we got over the North Sea. Then my airspeed indicator got sulky and froze up on me. I thought I would go down to a warmer layer, but the cold clouds were almost down to sea level so I climbed back again to about twelve thousand feet and eventually got over the top and carried on home. There were one or two anxious moments when we were landing, for the airspeed indicator was still frozen up and when you have no idea of your speed it is pretty unpleasant landing in the dark. But we managed it all right; there was a kindly moon to help us.

We all agreed that it had been a very good show.

# RAID ON BREST

### BY A PILOT OFFICER

THAT night we were just making an ordinary night attack on Brest harbour. We'd been there before, and we knew roughly what to expect. There was a bright moon when we got near the place, and the flak—the anti-aircraft fire—was coming up in much the usual sort of way. There were curtains of fire here and there, cones of fire over the more important spots and searchlights wandering all over the place.

It was pretty cold, but you expect it to be cold at the height at which we were flying. Then suddenly the port engine stopped. My observer, who was in the nose of the aircraft, switched on the inter-communication telephone and asked:

"What's happened?"

"Port engine stopped," I told him. Then, just as I said it, most of the noise died out of the aeroplane, and I said:

"Gosh, starboard engine stopped, too."

"Well, here we go," said the observer.

And that was all you *could* say about it. Both engines had iced up and stopped, and we were gliding, without any power, slowly downwards.

I was not particularly worried at first. Engines do sometimes ice up and stop, and when you come down into warmer air, with any luck they pick up again. My only worry was to travel as slowly as possible, so that the glide would last as long as possible. The observer and I had a chat about it and decided that, as we were already over Brest, we might as well have a smack at the target, even without any engines. The flak had died away for the moment, so we started out first run in. By then we had lost about a thousand feet in height.

We made a run across the target area, but we couldn't see the exact target we wanted, so we came round again and started another run, a few hundred feet lower. And we kept on doing that, a bit lower each time, for what seemed about ten years—although really our whole glide lasted for less than a quarter of an hour.

By this time, of course, the German gunners knew we were there, and now and then they seemed to have a pretty good idea exactly where we were. There was one particularly nasty burst of flak all round us when we were about half-way down, and it shook the aircraft a bit, but we weren't hit. Every now and then a searchlight picked us up and I had to take avoiding action to get out of it. I didn't want to do that more than I could help, because every time I did it we lost a little more height, and shortened the length of the glide.

Once I called to the air gunner to ask him if everything was all right.

"Sure," he said. "May I shoot out some of these searchlights?"

But I couldn't let him do that for fear of giving our position away completely. He was disappointed, and every now and then he came on the 'phone and said hopefully:

"There's a searchlight on us now, sir."

By the time we were down to about 4,000 feet, still without any engines, things began to look rather nasty. We were still gliding, and still making our runs over the target area, with the observer doing his best to get the primary target into his bomb-sight—and, of course, we were still losing height. To add to our worries, another Blenheim high above us, without the slightest idea that we were below, was dropping flares and lighting the place up.

When we had lost another thousand feet, we ran slap into the middle of trouble. The flak came up like a hailstorm going the wrong way. But even then, by a stroke of luck nothing hit us.

A little lower, however, our luck broke. The port wing stopped an explosive shell, which tore a hole two feet square in it. I called to the observer to get rid of the bombs on something useful, because we hadn't got enough height to go round again. The observer released the bombs, and they fell near the entrance to the Port Militaire—and still we were gliding downwards.

By now we were so low that we could see almost everything on the ground and in the harbour. I took one quick look over the side, but one look was enough. The tracer fire was coming up so quickly at us that I had to rely on the observer to direct me through the various streams of it. I had no time to watch it myself. The gunner got the dinghy ready in case we came down in the water, and he afterwards swore that he could see the black shapes of men by the guns on the ground, but I think it was probably the gun emplacements that he saw.

Right over the middle of the harbour, at just about 1,000 feet, we were caught in a strong blue searchlight—and almost simultaneously both our engines picked up again.

I raced out of the harbour, through even more violent flak, fortunately without being hit again, for at first the aircraft refused to climb.

All the way home I had to keep the control wheel hard over to the right, to hold the damaged wing up, and several times the observer had to come back to help me hang on to the wheel, the pull was so heavy. We made for the nearest aerodrome in England, where they did everything they could to help us down. But directly I lowered the under-carriage the aircraft started to drop out of the sky like a brick.

The only thing to do was to land fast, so the crew braced themselves on the straps, opened all the hatches, and we came in just sixty miles an hour faster than the Blenheim's usual landing speed. Luckily the undercarriage was undamaged and we landed safely.

Just one thing more. That aircraft is now in service again. The engineers worked on it night and day and, thanks to them, within three days I flew it back to my own aerodrome.

*February*, 1941

# ADVENTURES OF A NEW ZEALAND FIGHTER PILOT IN THE R.A.F.

*This is the story of a twenty-three-year-old fighter pilot from Wanganui, New Zealand. Not only is he a squadron leader with a great many confirmed victories to his credit and the holder of the Distinguished Flying Cross and Bar, but he has himself been shot down seven times and has three times had to bale out from crippled aircraft. He has had a head-on collision with an enemy machine, has seen his plane blown up three seconds after abandoning it and has even been bombed on the ground when taking off.*

Well, I certainly don't feel any the worse for my various adventures and I hope to do a lot more flying yet.

When war broke out, for a long time life was uneventful. In fact our first engagement did not take place until the German army was half-way through France. But my adventures began with that first engagement and from then on they came pretty thick and fast.

That first engagement was over Calais. Another pilot and I volunteered to escort a small training type aircraft to Calais aerodrome where the trainer was to land and pick up a British pilot who had force-landed. He was in command of a squadron which, operating from the same English base as ourselves, had been fighting along the French coast during the German drive to Dunkirk. Calais was surrounded by German troops, but the aerodrome was still a sort of No-man's Land.

Well, the trainer landed, but the passenger was nowhere to be seen and because of the attention we were getting the trainer had to take off again. My pal and I were "milling around" at 1,000 feet and the other plane was just leaving the ground when a dozen Messerschmitt 109s hurtled down on us. The trainer was forced back to the ground and stopped in a hedge while our two Spitfires had a grand shooting match with those 109s. It was over in a few minutes, when the survivors flew off, leaving us still in the air and the wrecks of several 109s lying on the beach, on the aerodrome and in the middle of the town. I had got two certain and one probable. The other Spitfire had one certainty and two probables. Immediately after the pilot of the trainer got his aircraft ready to take off again and arrived home safely without a bullet-mark.

Next day the whole squadron was sent up to intercept fifteen Hes, twenty-four 110s and three squadrons of 109s. We shot down eleven without a scratch to ourselves. After that we had dozens of engagements, mostly over the French coast and near Dunkirk, for the great evacuation of the British Army had by then begun. It was tiring doing several patrols a day, starting at three-forty-five a.m., and getting in two before breakfast. But I think all the pilots who took part were living on the crest of a wave of enthusiasm and wouldn't have stayed out of it for anything. The losses to the enemy were tremendous, but of course the R.A.F. had its losses too.

It was during the Dunkirk fighting that I had my first real adventure. One day I was chasing a Dornier 215 from Dunkirk to Ostend in and out of clouds. We were firing at each other and it seems we shot each other down more or less simultaneously. My engine was hit and I crash-landed on the beach at Ostend. The Dornier passed over my head with both motors on fire and, I think, crashed five miles further down the beach.

I was knocked out—cut my forehead and got concussion—but luckily I came to and was able to get out of the machine which was beginning to burn. A few seconds after I scrambled out the petrol tank exploded and the aircraft became a beacon. Ostend was surrounded by Germans, but I saw none. I walked along the beach for half an hour getting shot at now and then by Belgian soldiers who took me for a Hun. Making my way inland I found a bus carrying Belgian troops to Gravelines and I rode with them until they stopped halfway and seemed to be in some trouble. I helped myself to a car—there were cars all over the place—and went on, but few of those abandoned cars had much petrol and I had to transfer to others five times before I reached Dunkirk, finishing the trip on a motor-cycle. I had crashed at Ostend a little before dawn and it was now midday.

I went on the beach among the troops to wait my turn for a place on a boat. The Germans bombed us from time to time, but I got safely away in a destroyer. On a zig-zag course it took us five hours to reach Dover and German planes followed us almost all the time dropping bombs. There were 1,000 troops on board and one bomb hit us, but did not prevent us from getting into Dover.

About ten p.m. I was on the quay at Dover and by four the next morning I was back at my base. I had been absent altogether only twenty-four hours.

A day or two later I was involved in a collision with an Me. 109. Leading my flight I intercepted a Red Cross seaplane which was escorted—which a genuine hospital aircraft need not have been—by about twenty 109s. Two members of my flight were killed and I ended up with a collision. We had, however, collected two of the Germans and two probables—as well as the seaplane.

The collision occurred because I thought the Hun would give way and he thought I would. We had passed each other once, turned, and were coming together again. Too late to turn, I must have dropped slightly in a last second effort to dive and the 109's belly tore along the top of my fuselage, ramming my hood down on my head. My propeller had been snapped off and the engine pulled half out of the aircraft.

I found I could still hold the machine in a glide, but I was blinded by smoke and flames from the engine and could see absolutely nothing. Gliding down towards the English coast at about 100 m.p.h.—the collision occurred a few miles out to sea—I sat and hoped for the best.

The best was to hit an anti-invasion post, which pulled off a wing and sent the aircraft slithering on its side through two cornfields.

It finished up burning nicely and with ammunition popping off in all directions due to the heat. I had climbed out as quickly as possible, slightly burned on the back of the hands and forehead, but otherwise O.K. I had tightened up my cockpit harness during the glide down and that probably saved me from a broken neck.

My next adventure was a few weeks later when I chased two 113 Hes back to Calais, from the North Foreland. One of them I shot down over Calais aerodrome. The air was full of 113s, and they followed me like a swarm of bees as I turned for England. Their fire seemed to be coming from all directions and I flew flat out doing everything I could think of to shake them off. The Channel seemed an awful long way across. One bullet ripped the watch from my wrist and another singed my eyebrow.

At Folkestone, the Germans turned and went home. I carried on, but my aircraft was full of holes and suddenly, only 800 feet above Ashford, it began to fall to pieces. I was too low to jump and I could not have landed the plane. I was still doing 250 m.p.h. so I pulled back the stick, hoping to climb a few hundred feet before dropping out. But I got caught on my seat and it was so late when I did get clear that I hit the ground a few seconds after the parachute opened and knocked myself out. I spent that day in East Grinstead hospital, but was back flying the next.

Two days later I was in a scrap with a large force of 110s, and after shooting one down had my oil-tank shot away. I was about five miles over Chatham and had to force-land without an air-speed indicator—it had been damaged—but I got down all right.

By this time I was becoming used to being shot down and when I next got mixed up with a large force of Jerries I wasn't in the least surprised to have my Spitfire's rudder shot away and my engine set on fire. Nor, if it comes to that, was I much concerned. I had gone into the fight wholeheartedly, had shot one German down for certain, another was a probable victim and now *I* was shot down, and I knew from past experience that I still had a very good chance of living to fight another day.

I had glided down from 28,000 to 10,000 feet, keeping control by using the ailerons in place of the rudder. But then the engine caught fire and I had to bale out. Remembering how I got caught in my seat on the last occasion I did not attempt to tip myself out, but stood up in my seat and took a header over the side. I cleared everything beautifully.

It was a lovely day, and as I came nearer the ground I could hear people talking in the streets of Maidstone and pointing to me. I don't know what they thought, for I had been practising side-slipping on the way down. You side-slip by pulling on the cords and "Spilling a little air from one side of the brolley". It was just as well, for I had to side-slip pretty vigorously to miss a house and landed instead in a plum-tree.

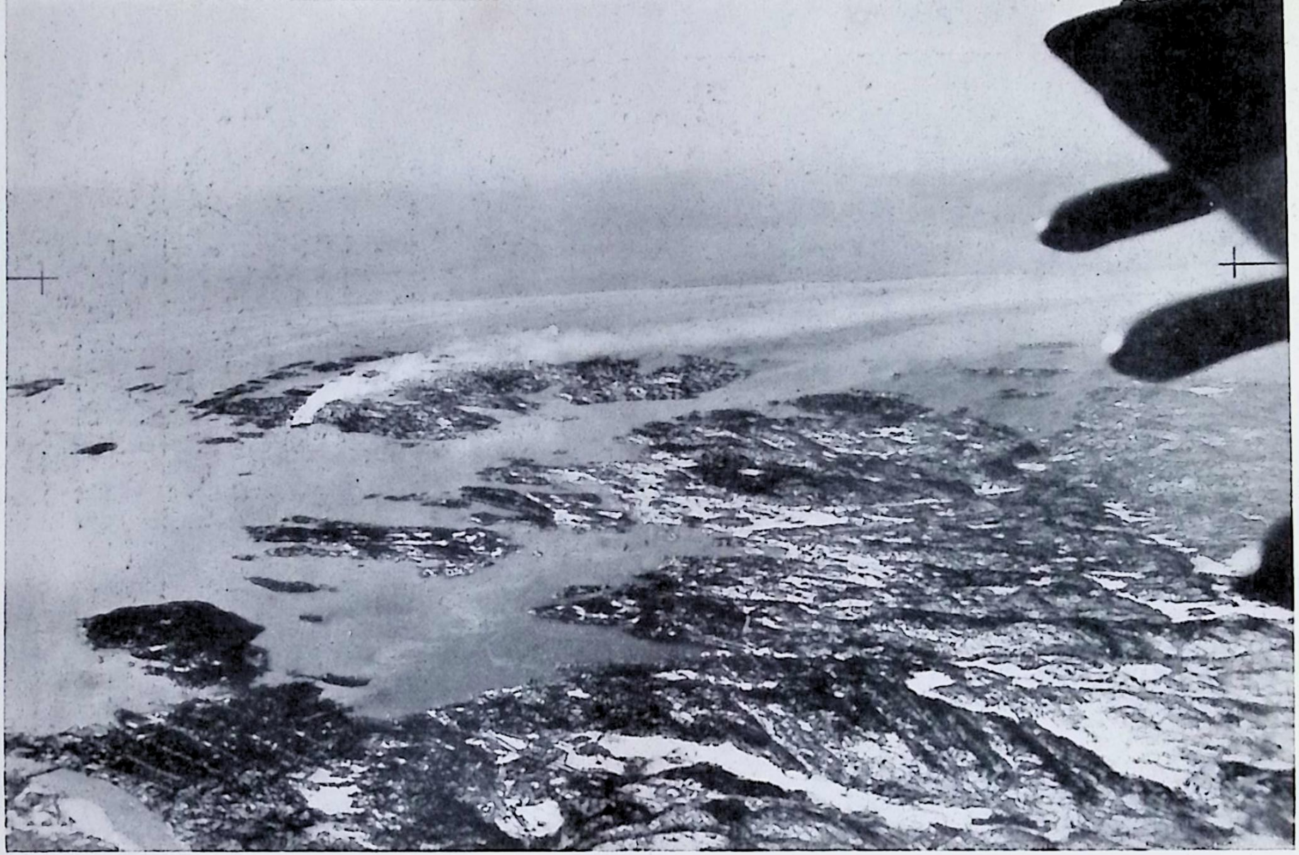
Next morning I was just taking off, doing about 100 m.p.h. over the ground, when bombs whistled down on the aerodrome. The Hun was dive-bombing us. One bomb landed just in front of me, blew the engine clean out and sent me and my Spitfire hurtling upside down along the ground for 150 yards. My leather helmet was torn where it had caught the ground, but beyond slight concussion and bruises I was all right. I was helped out of the plane by a colleague who had been blown out of his aircraft. He revived me and we ran for shelter, as bombs were dropping thick and heavy. A couple of Jerries tried to machine-gun us as we ran, but they didn't get us. I was put to bed and I was still in bed the next day when another raid started. I felt I would rather be in the air than on the ground so I hopped out of bed, slipped on some clothes, went up in my Spitfire and brought down a Dornier.

After these adventures I was just beginning to think that things were getting uneventful when I had another thrill—as big a thrill as I want. A pupil pilot to whom I was teaching tactics flew into me and cut my Spitfire in two. I was caught up on the remnants of my aircraft and couldn't jump. The aircraft dropped a good many thousand feet before I got clear, and I had struggled so much that half my parachute harness was torn off. I found the rip-cord handle dangling six feet out of reach.

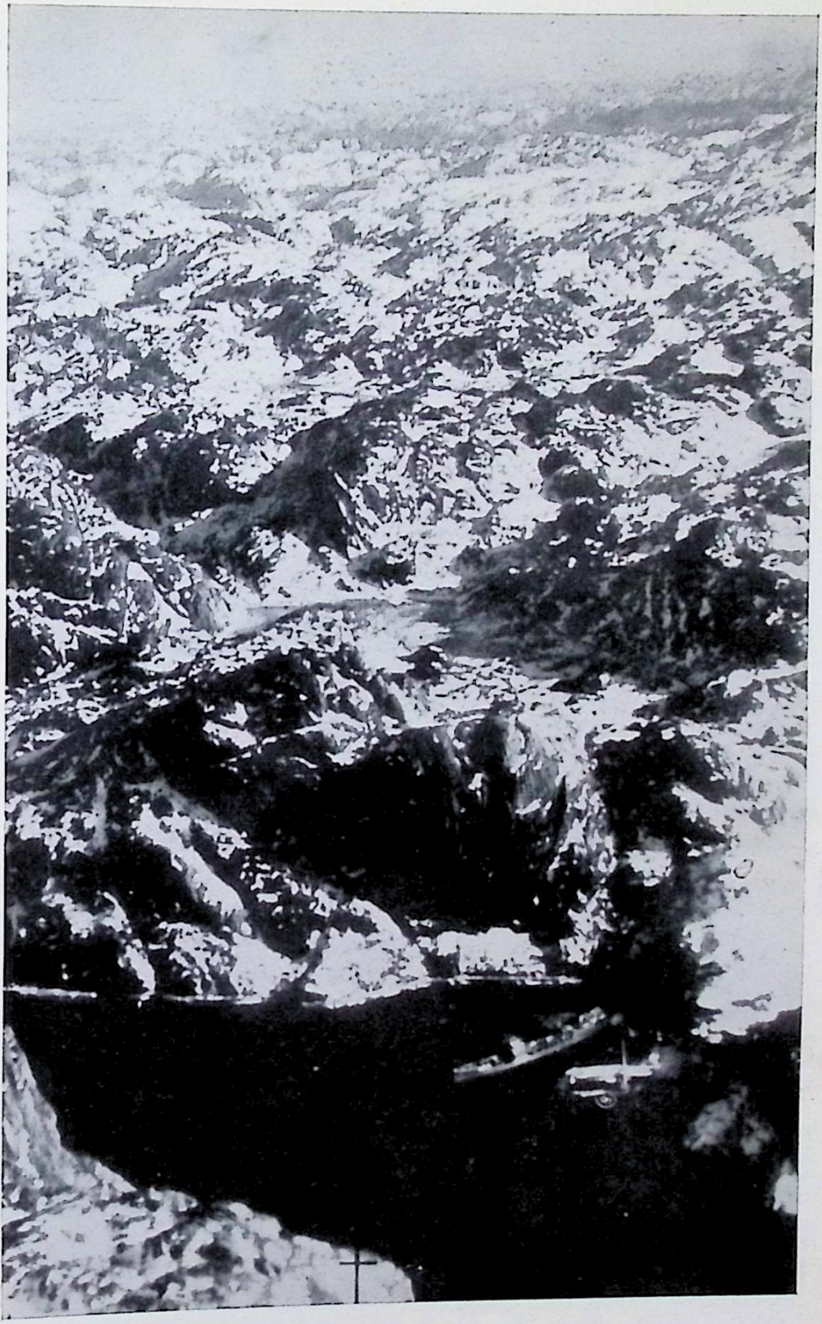
The earth was coming up to meet me and there was nothing I could do. I closed my eyes and waited. Suddenly there was an awful jerk on my shoulders. The "brolley" had opened on its own accord. Subsequent examination showed that the rip-cord and pin had never been pulled, but that somehow the silk had bellied out and checked my fall. I landed heavily, however, and had to go to hospital for three days—a record time for me. And I hope it'll remain a record.

स्कैंड/Scanned

Air Chief Marshal Sir Charles F. A. Portal,
K.C.B., C.B.E., D.S.O.,
Chief of the Air Staff

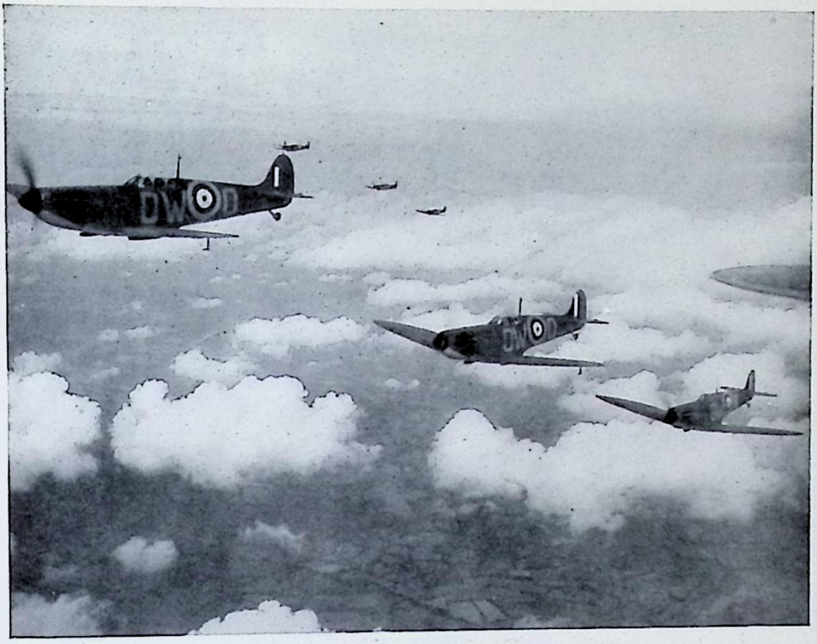


An aircraft of Coastal Command over Kristiansand. On the left of the photograph can be seen a German merchant vessel set on fire by air bombardment

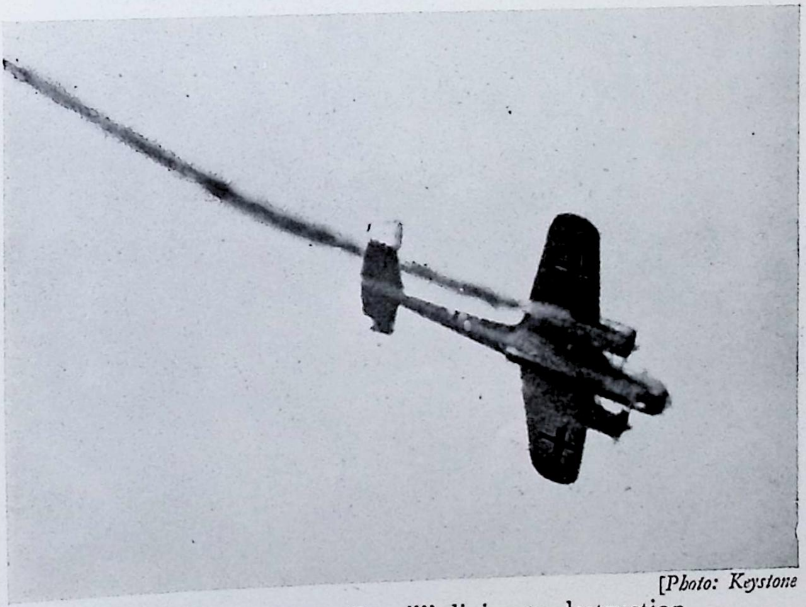


The *Altmark* in Jossing Fiord, Norway. It was this air photograph which disclosed the presence of the German ship and led to the rescue of the British Merchant Captains by the Royal Navy

Hurricanes above the clouds

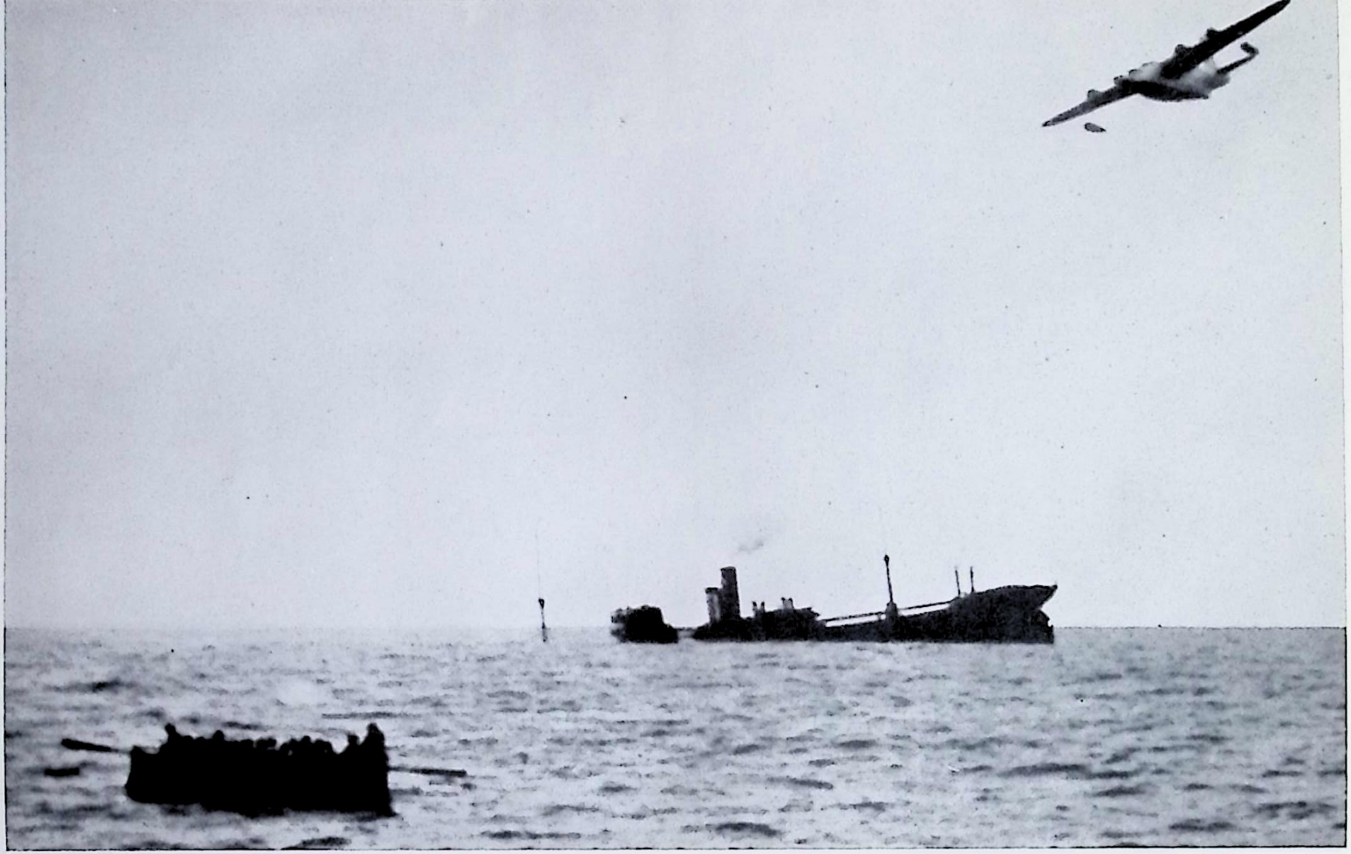


A flight of Spitfires on patrol

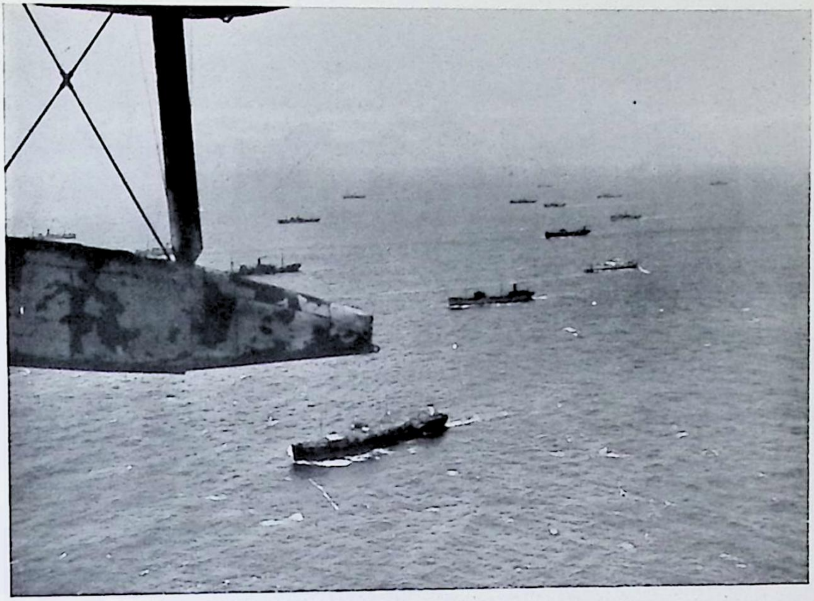


[*Photo: Keystone*

A Dornier "Flying Pencil" diving to destruction



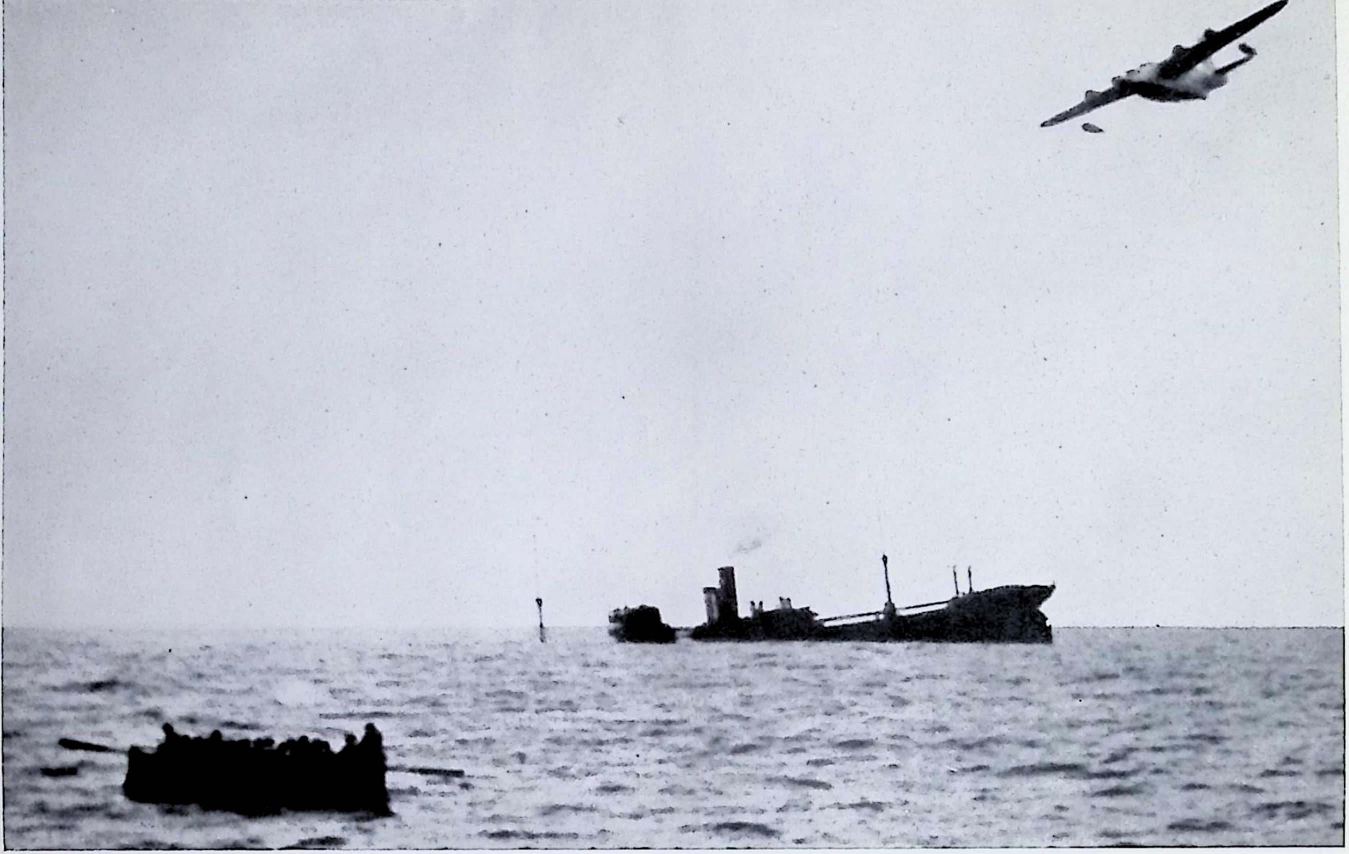
A Sunderland flying boat sights the sinking *Kensington Court* and its lifeboat, the occupants of which it subsequently rescued



Channel Convoy

A parachute descent

[*Photo: Sport & General*



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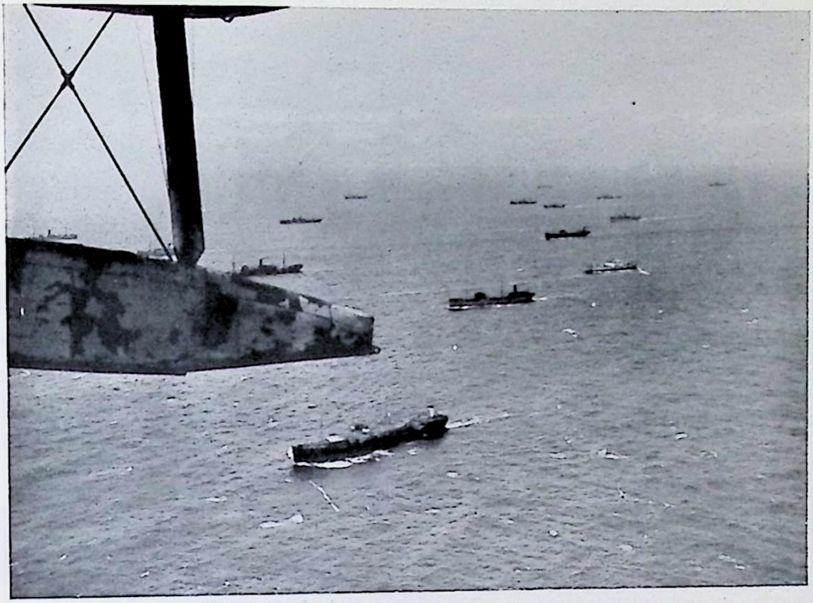

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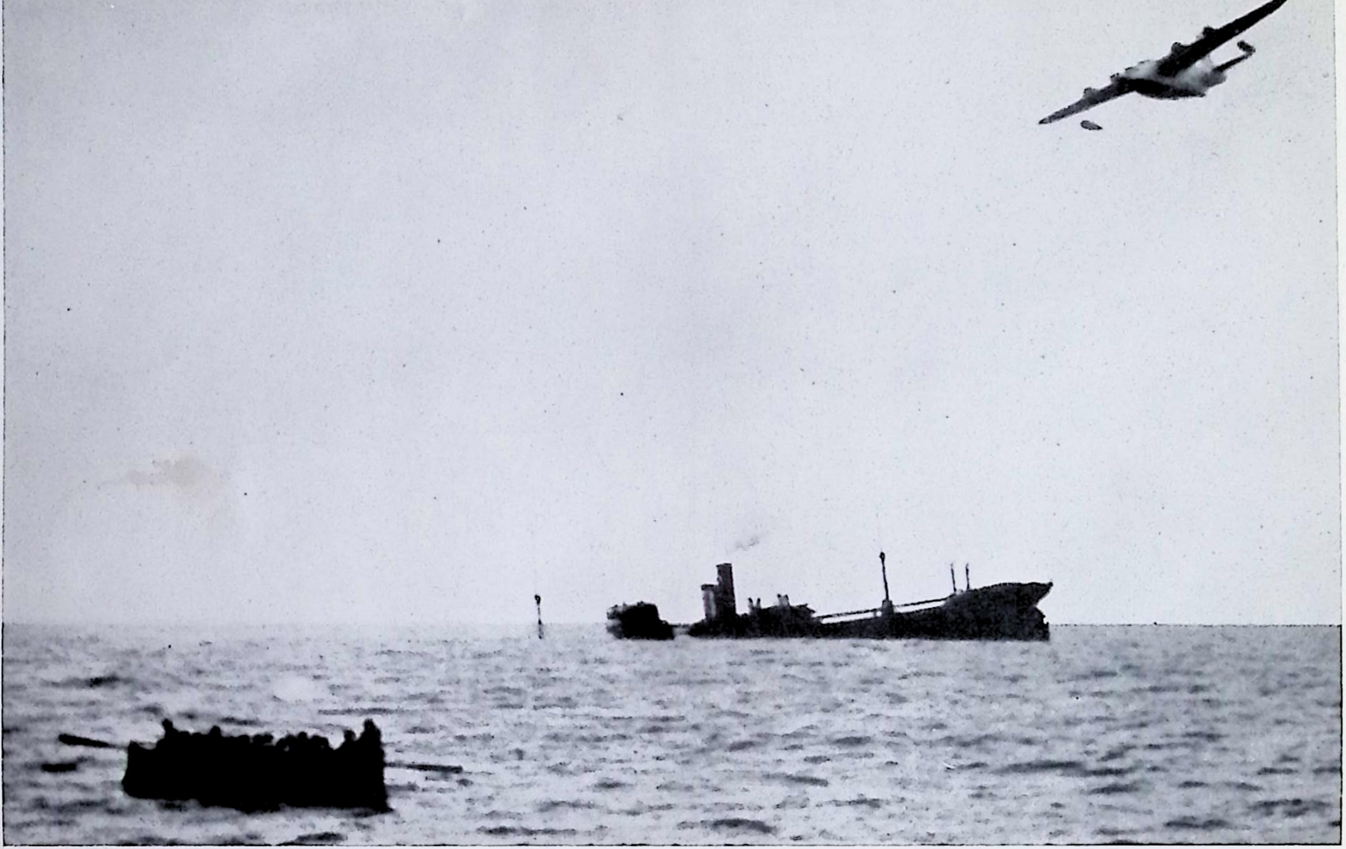

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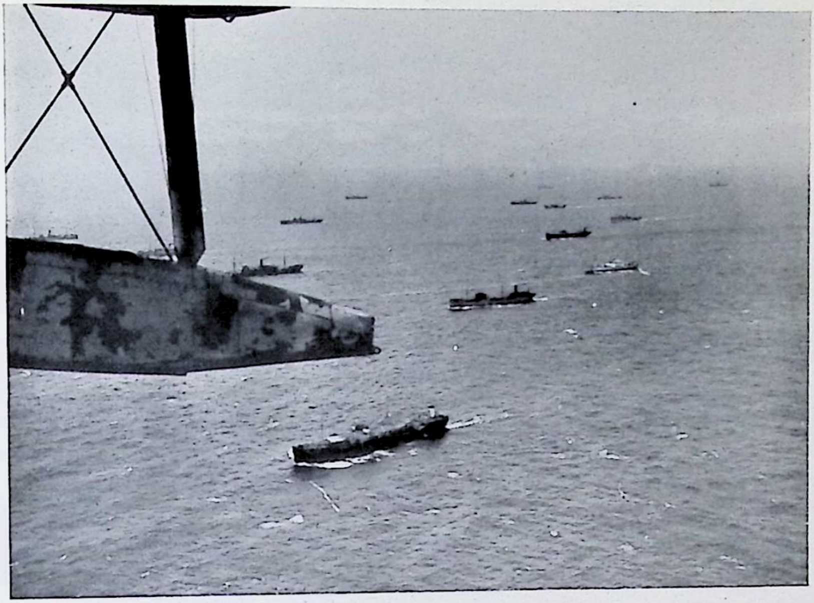

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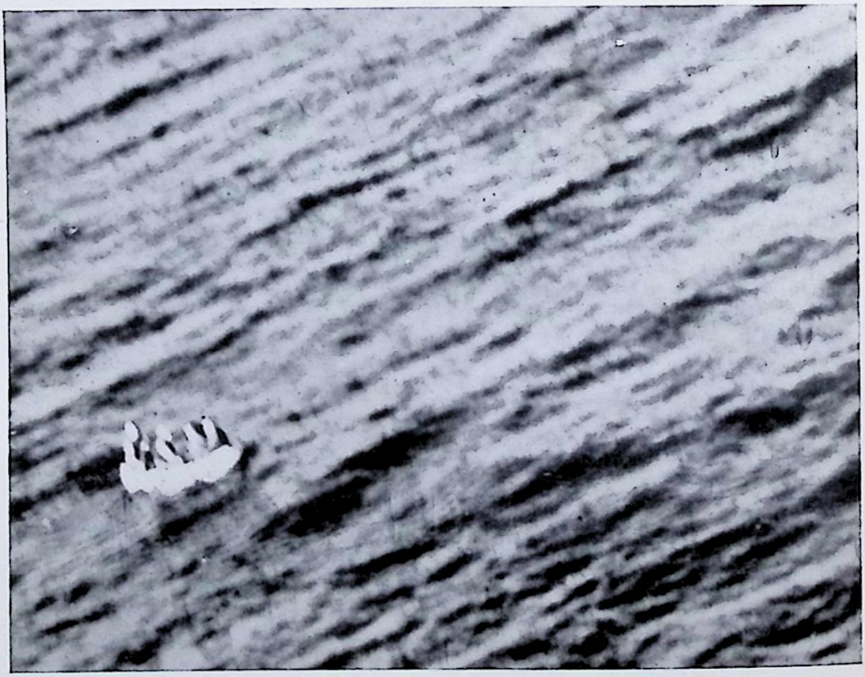
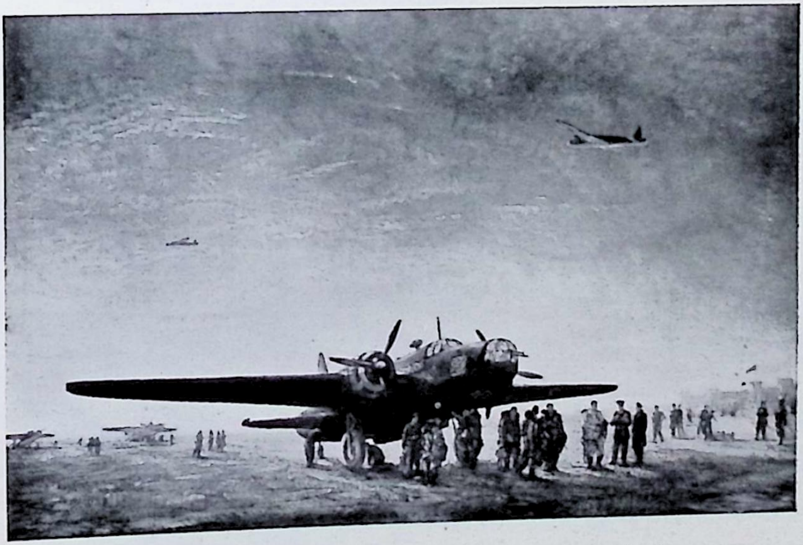


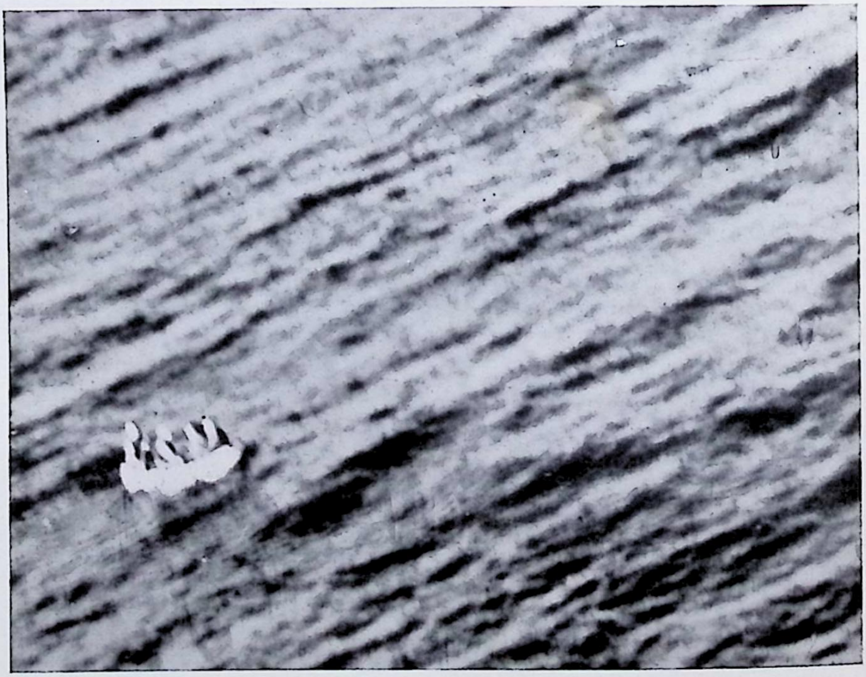
Adrift in a rubber dinghy

Blenheims on patrol



"Return at Dawn," a reproduction from the painting by Charles Cundall

A Sunderland flying boat



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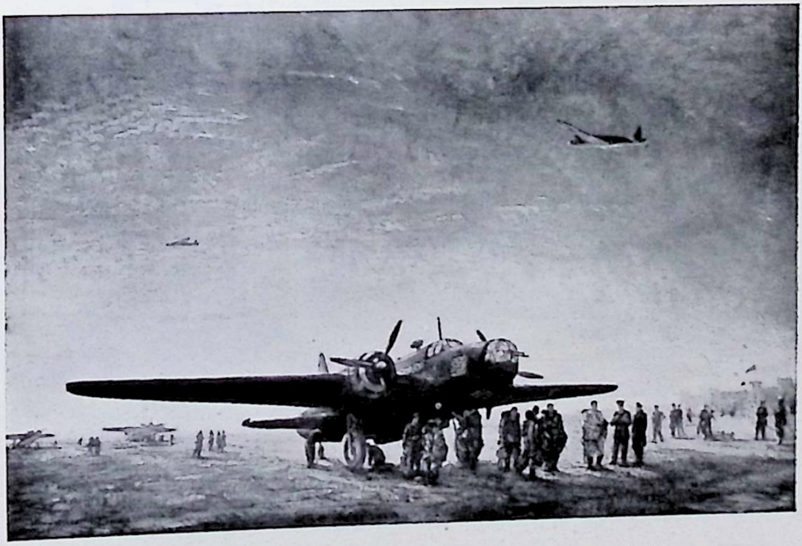

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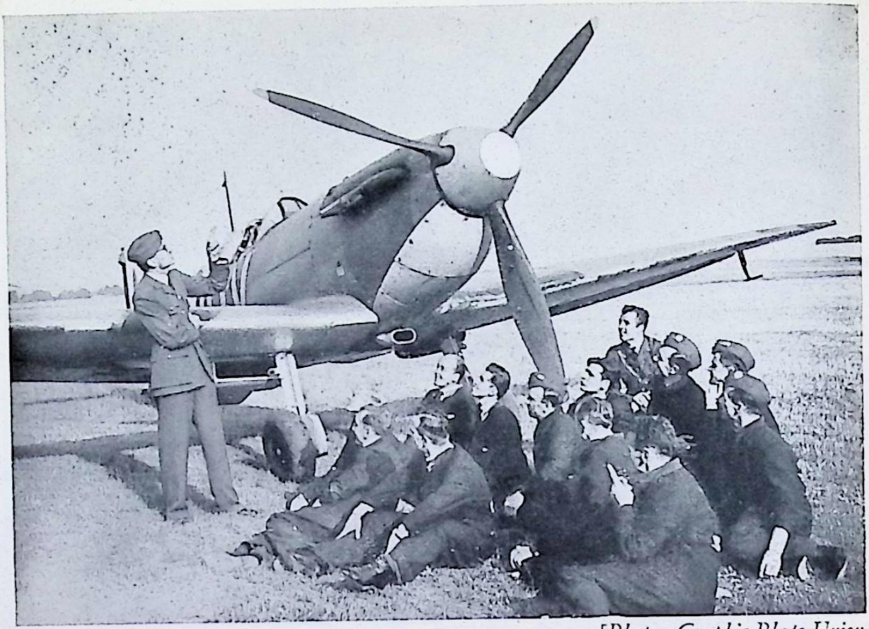
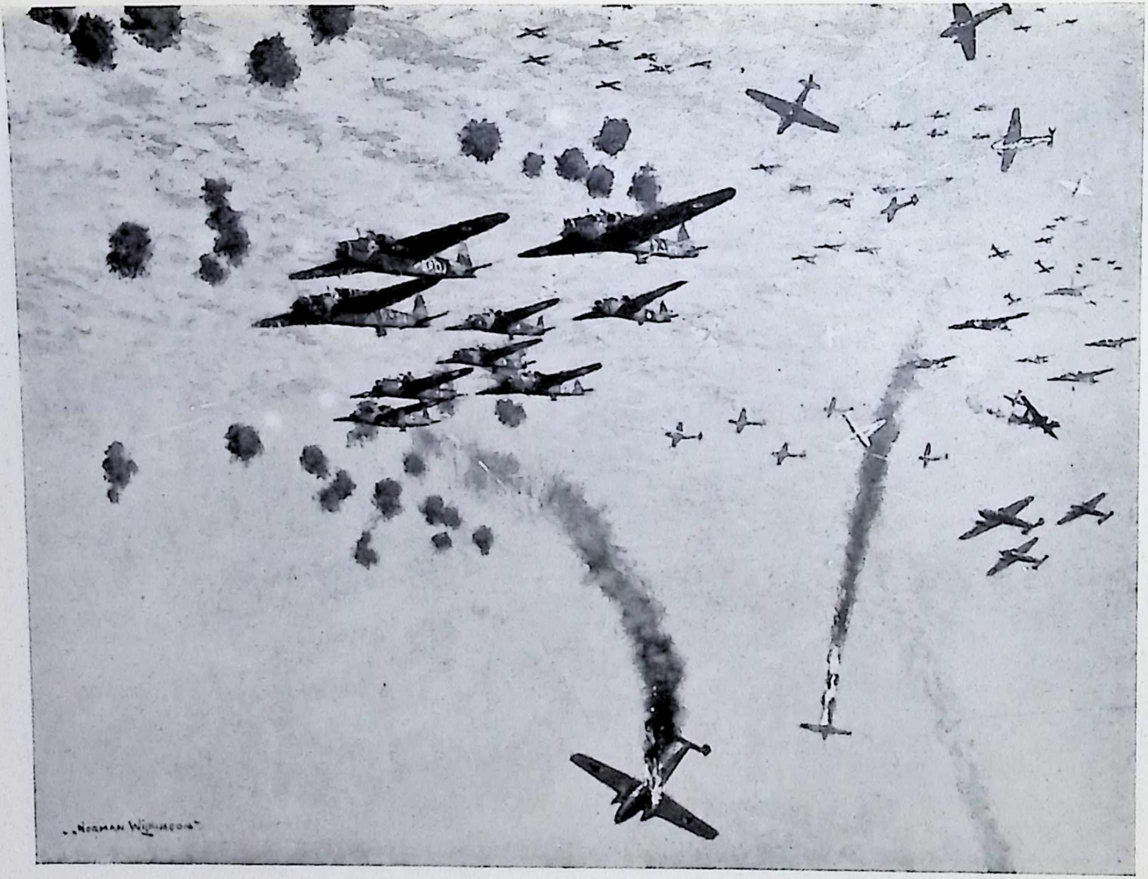


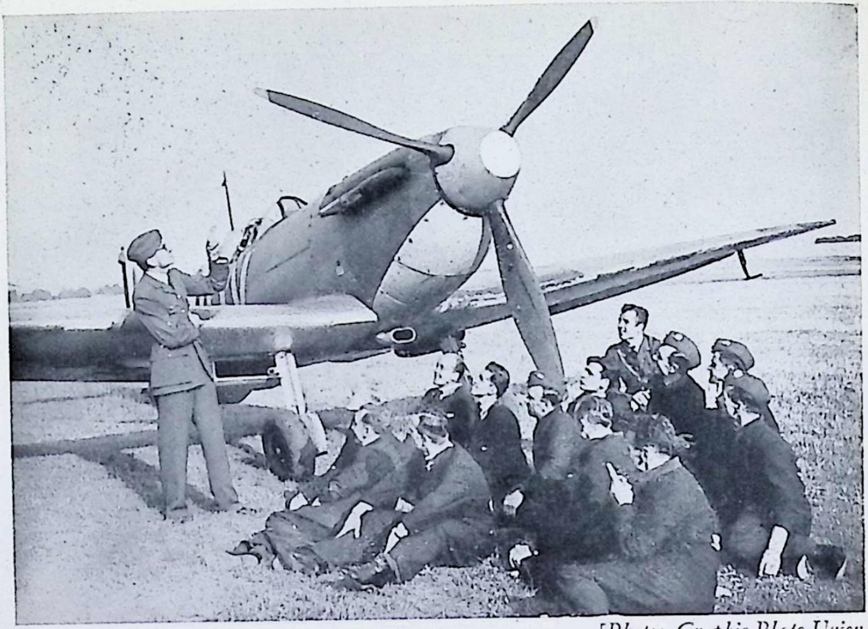
[*Photo: Graphic Photo Union*

A Czech pilot officer lectures to his countrymen on the Spitfire

Pilots studying the day's operations


Norman Wilkinson

"Air Battle," a reproduction from the painting by Norman Wilkinson



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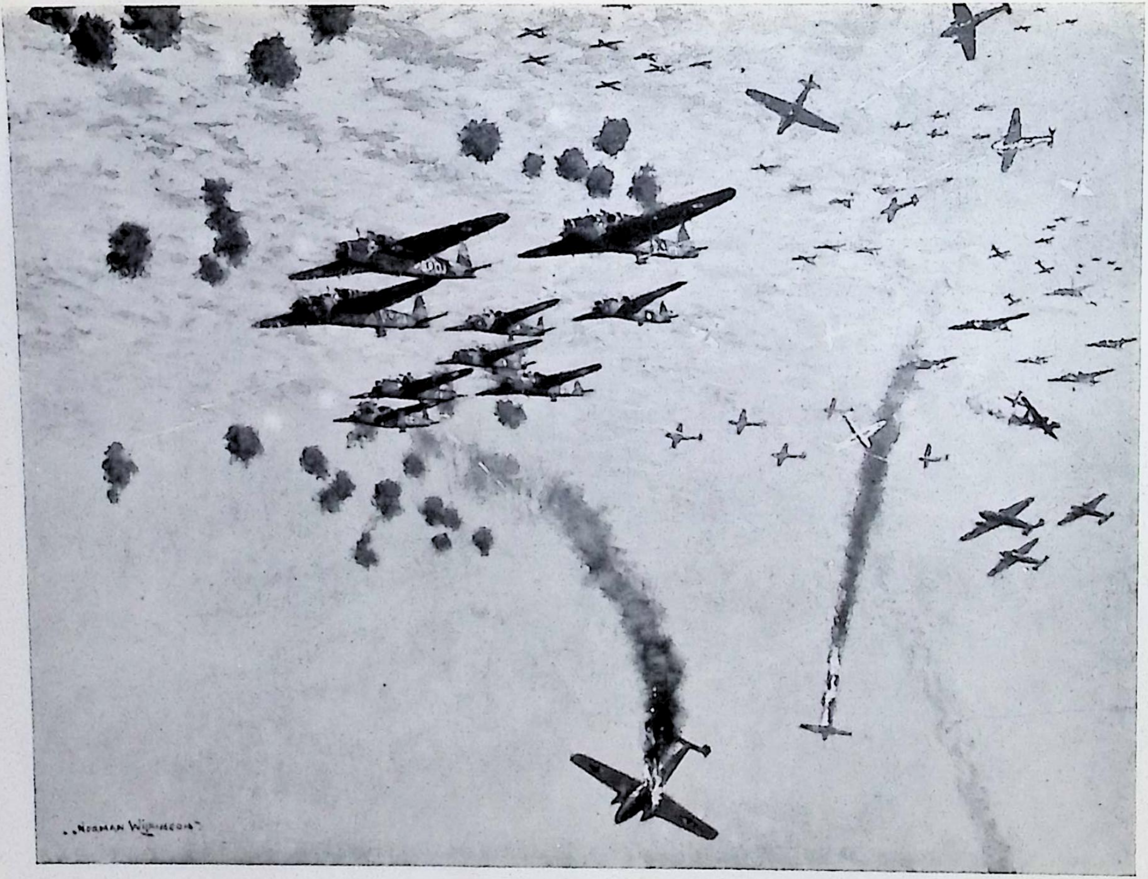
NORMAN WILKINSON

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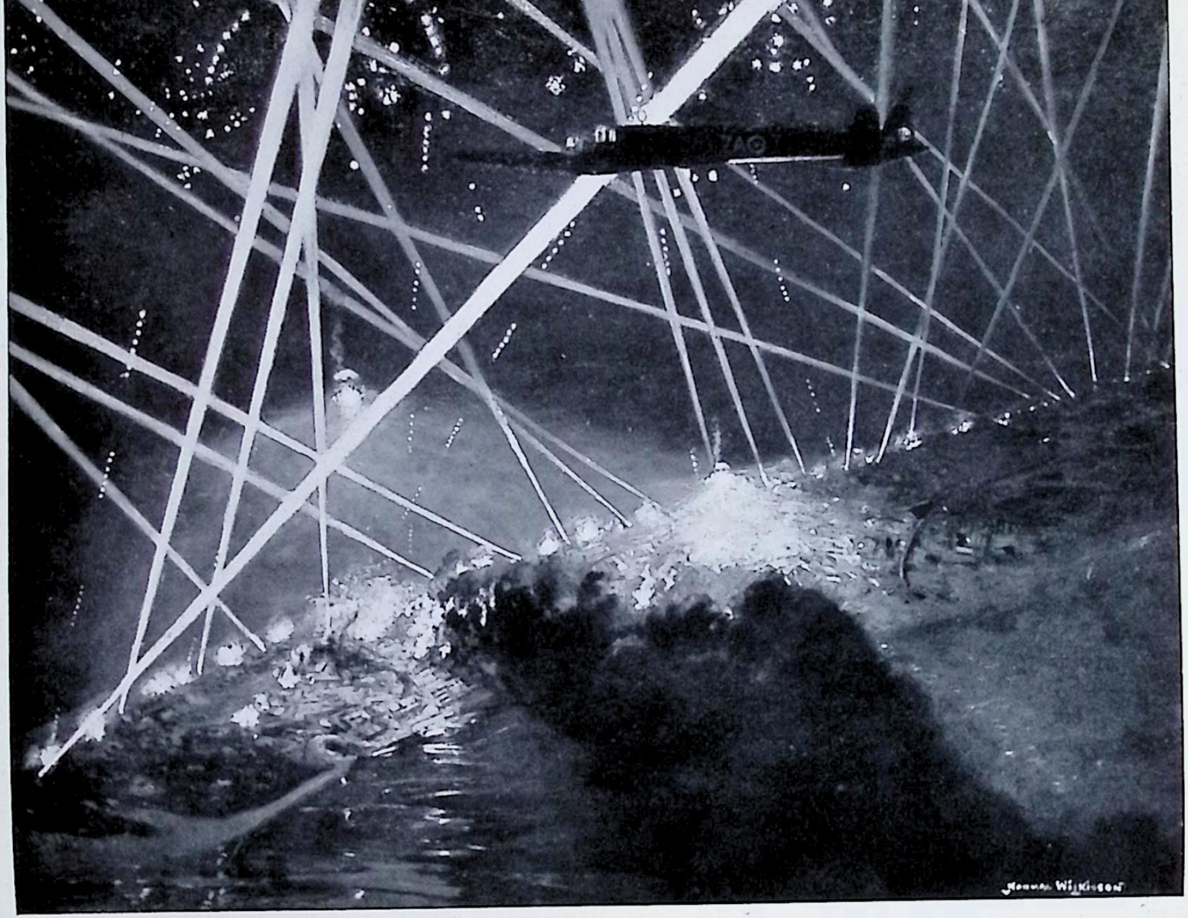
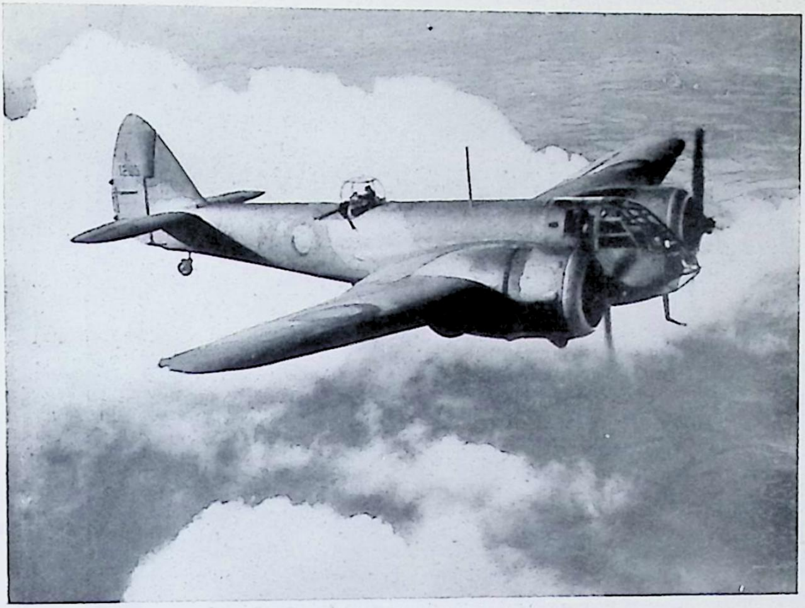

Norman Wilkinson

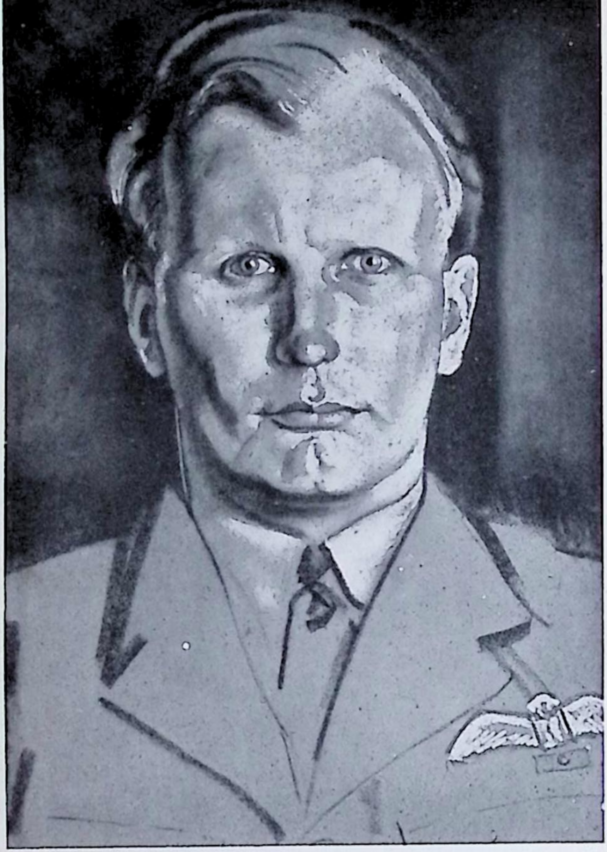
"Raid on Sylt," a reproduction from a painting by Norman Wilkinson



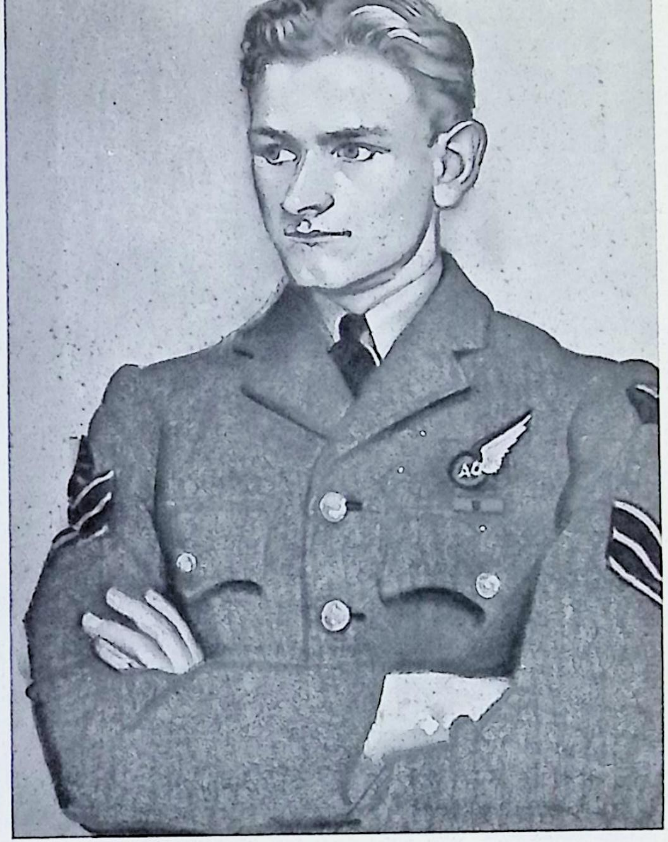
A Blenheim Aircraft of Bomber Command

[*Photo: Planet News Ltd.*

Pupils training on North American Harvard planes

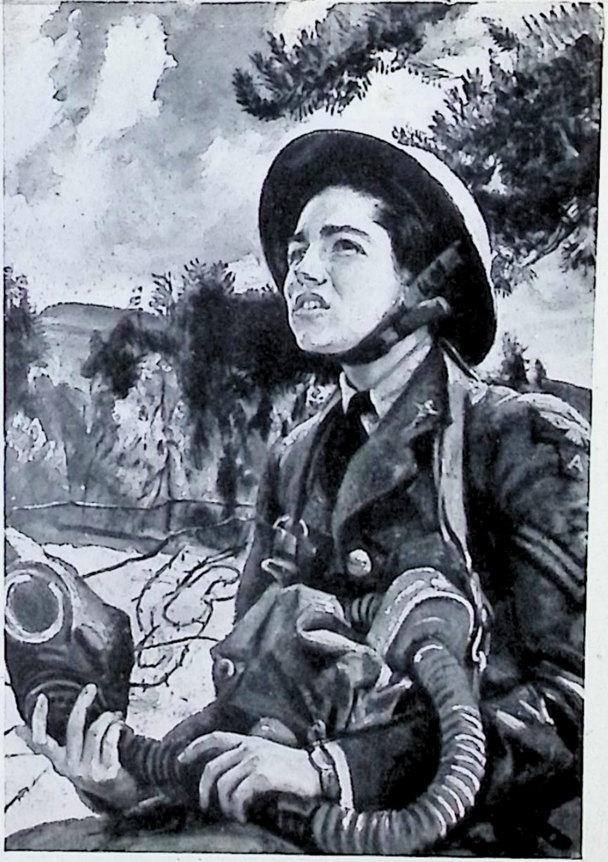


"Flight Lieutenant R. A. B. Learoyd, V.C.,"
a reproduction from the painting by Eric
Kennington

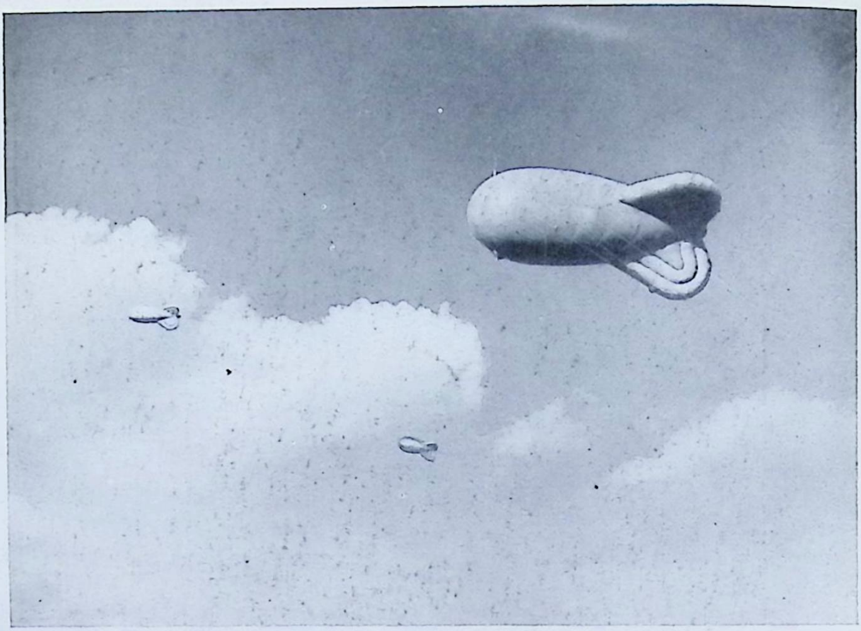


"Sergeant J. Hannah, V.C.,"
a reproduction from the painting by Eric
Kennington

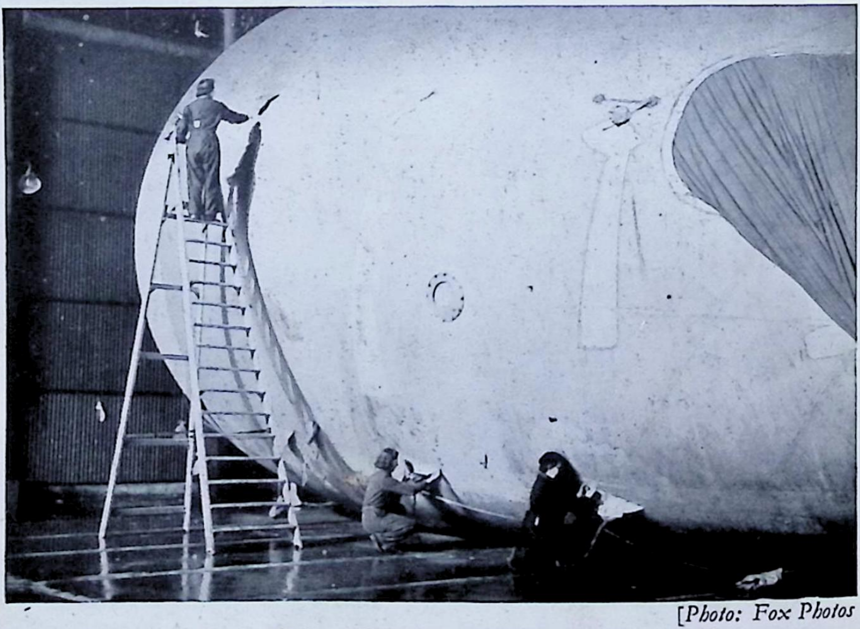
Flight Lieutenant J. B. Nicolson, V.C.



Corporal J. D. M. Pearson, W.A.A.F., E.G.M., from a reproduction of a painting by Dame Laura Knight



Balloon Barrage



[*Photo: Fox Photos*

Fabric workers of the W.A.A.F. repairing damaged barrage balloons